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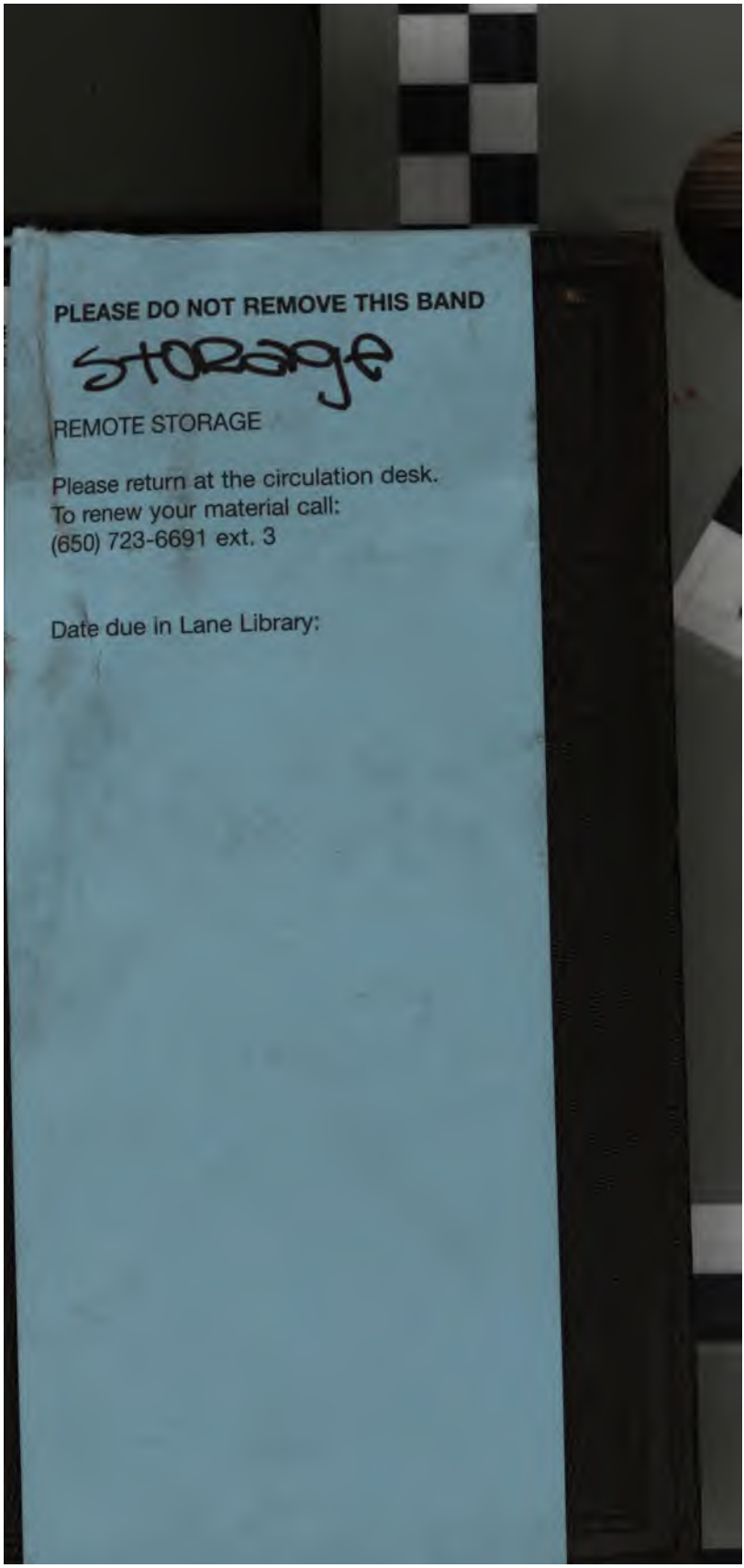
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MIDWIFERY

AND THE

DISEASES OF WOMEN.

MIDWIFERY

AND THE

DISEASES OF WOMEN

A Descriptive and Practical Work

SHOWING THE SUPERIORITY OF WATER-TREATMENT IN MENSTRUATION AND ITS DISORDERS, CHLOROSIS, LEUCORRHEA, FLUOR ALBUS, PROLAPSUS UTERI, HYSTERIA, SPINAL DISEASES, AND OTHER WEAKNESSES OF FEMALES; IN PREGNANCY AND ITS DISEASES, ABORTION, UTERINE HEMORRHAGE, AND THE GENERAL MANAGEMENT OF CHILD-BIRTH, NURSING, ETC., ETC.

Illustrated with numerous Cases of Treatment.

BY JOEL SHEW, M.D.,

AUTHOR OF VARIOUS WORKS ON HYDROPATHY.

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1853

INTRODUCTION.

CONCERNING matters pertaining to midwifery, friends of Water-Cure sometimes ask questions like the following:

1. What methods of treatment shall we adopt to enable us the better to pass through the period of pregnancy?

2. What methods to aid in mitigating the pains and perils of childbirth?

3. Shall we employ a physician on such occasions?

4. If so, shall it be a male or female practitioner?

As regards the first and second of these queries collectively, I remark, that in 1843 I commenced the practice of midwifery according to the hydropathic plan, and have, from time to time since that period, published articles on the subject of pregnancy and childbirth, and have put forth, also, a small work which has had a wide circulation, and been the means of doing some good. There is, doubtless, no branch or department of the medical art in which a judicious regulation of water, air, exercise, and diet, are more strikingly beneficial than in that now under consideration. I would speak earnestly on this point, and as to the truthfulness of what I affirm, I may confidently refer to the experience of those who have a knowledge of the subject—*to those who have themselves experienced the effects of hydropathy.* We do *not* hear persons say, "We have resorted to the water-treatment in childbirth and have found it to be an injury to us;" but on the contrary, we *do* hear it said, "We had borne a number of children under the old methods, suffering at each time more than mortal tongue can describe; but now, since we have become informed on the subject of Water-Cure, we find childbirth—hard as it necessarily is—a much more

easy thing to bear." I repeat, the *uniformity of the testimony* in favor of water-treatment among those who have in their own persons tested it, is remarkable and without parallel in the healing art.

But I must here allude to the fact, that different practitioners in the new system must, some of them at least, entertain honest differences of opinion in regard to the hydropathic uses of water in pregnancy and childbirth. One tells us that too much bathing is usually practiced on such occasions; another that too little is done. One tells us that water patients are everywhere allowed to get up *too soon* after childbirth; another that they are kept in bed too long. One says that the vagina syringe is almost the all in all for woman kind, and would almost make us believe that women were made for syringes, and not syringes for women. Another says that the vagina syringe, so far as labor and the getting up are concerned, is at best comparatively only a poor affair; that it is not in accordance with the principles of sound physiology or pathology to throw *cold* water upon any bleeding surface—external or internal of the body; that the use of the vagina syringe is revolting to the feelings of nine tenths of all midwifery patients who have had it used; that so far as the limited experience of hydropathic practitioners extends in this department, it would appear that those who have not in their practice thus used cold water internally, have had, at least, as good success as those who have.

In regard to preventing the "pains and perils" of childbirth, there seems likewise to be some differences of opinion among the water doctors, so called. Some who are, as it were, just commencing the practice, and have more zeal than knowledge in the matter, would have us believe that water almost wholly prevents the pains of parturition and the perils thereof. But there are others who maintain, that do what we will, labor must, as a general fact, be attended with severe suffering; that as a mere palliative of pain at the time of labor, little can be claimed for water; that labors are not, probably, on the whole, shortened by the use of water either before or at the time; that very short labors are not, probably, more frequent in the new than in the old way; that very quick labors are not desirable, since experience teaches that they are not so safe as those which are more protracted. It is maintain-

ed, too, that say what we may, childbirth is, and must necessarily be, in all civilized societies, a serious thing to enter upon. What woman who has ever passed through this ordeal does not regard it so? and what physician, no matter how old, or experienced, or skillful he may be, does not, every time he enters the lying-in chamber, feel this responsibility to be a great and trying one? Admitting all that can be done by the water-treatment in matters of midwifery, and much, very much, certainly may be—childbirth is yet an agony, and must ever continue so to be.

Various other points might be mentioned in which there is honest disagreement of opinion among hydropathists. This must, in the nature of the case, be so. Nor should such disagreements make us enemies toward each other. One thing is remarkable, and speaks volumes for the new method, namely, *the good success that everywhere attends it.*

Respecting our third question—Shall we employ a physician on occasions of childbirth? I remark that people should, themselves, be the judges. If you possess the courage that I have seen exhibited among the peasantry of the Silesian mountains of Germany, you may get along almost without an assistant of any kind. There childbirth is looked upon in a light very different from what we see in our own country. If, moreover, you can, by great and continuous effort, arrive at the degree of physical hardihood and strength which is possessed by those vigorous, out-of-door working females to whom I have referred, then you may, as a general thing, get along safely without the aid of a physician. But things are different with us here; we are not to expect that our females will, for generations to come, be as hardy and enduring as the peasant women of many parts of the old world.

In this country we find that the younger married people are more apt than the older to resort to water-treatment in childbirth. I imagine I am addressing myself to a young couple, who hope soon to become parents. They have talked the matter over, and resolve that they will try to get along without a doctor of any kind. I say to them, Young friends, you are about to pass through a matter which you can know but very little about beforehand. Would it not be safer to get a physician into your house, at least? Pay him for his time accordingly as you are able, and, mark my

word, he will be very willing to stay in the parlor, kitchen, anywhere, if you do not need him. If it be in the night, get him off to bed, and tell him you will call him when needed. Thus you will both feel safer than if he were away. You might need him very much before morning, and possibly when it would be too late to get him from a distance. Once the birth is over, and the mother rested a little, he will allow at least a tepid sponging; and the word tepid allows a good deal of latitude, so that the water may be taken quite cool. Besides, too, once you have got the liberty to do it, you can repeat it often. By so doing the doctor will be astonished to find how well you get along.

Should male or female physicians be employed in midwifery? This is a bone of contention with many. The facts are these: the world got along anciently very well without physicians, or, at most, with those only who were rude and untaught in schools. I do not know that we have statistics enough to prove much in regard to the question, as to whether the world is more thriving with or without physicians; and as to whether male or female midwives are more successful, the great Dr. Rush—who was certainly a most candid and liberal-minded man, and in all particulars not only in favor of human right, but of "woman's rights," of which we nowadays hear so much—tells us "that it appears from the bills of mortality in London and Dublin, that about one in seventy of those women die in childbirth who are in the hands of female midwives; but from the accounts of the lying-in-hospitals in those cities which are under the care of man-midwives, only one in a hundred and forty perishes in childbirth." But admit that the female doctors in those cities are not properly educated, or so well educated in their calling as the men are—a thing, however, which does not appear—it is not yet proved to us that males should not practice in this department.

The broad ground I take on this subject is this: educate THE PEOPLE in all matters pertaining to health; let physiology and hygiene be taught at the fireside and in the schools as much as any other science. At a proper age let both sexes throughout be taught all that may be concerning pregnancy and childbirth; and, all this accomplished, let those of both sexes practice whom skill, talent, and experience dictate. Educate the PEOPLE, and they will find

out soon enough who are the most competent, and who are not, to practice the healing art.

As to the talk we hear so much of at this day about *the indecency of man-midwifery*, it is idle twattle, that scarce needs a remark. Indecent for a man to get up of a cold, wet night, and attend a poor, suffering woman in labor, and night after night, as not unfrequently happens! Indecent for us to resort to the use of instruments with which to destroy the life of the unborn child, in order to save that of the mother, as must sometimes, with the best possible management, be done! Away with all such foolishness, and the worse than false modesty which dictates it! They ought to take shame on themselves who utter it.

Yes, friends, I will tell you in a word how I feel in this matter. When I was born, my most worthy mother was very young. I was her first child. And since I have come to years of understanding, and often when I have attended women in childbirth, I have thought it was not possible for me to be thankful enough to that good old man—and who is yet living—for attending my mother at my birth, young and inexperienced as she was; and although I know that I could now teach him some things, which in his hoary age he does not at all understand, I have yet often felt in my heart that I would go leagues long to take him by the hand, that I might thank him for the good he had done.

Depend upon it, friends, there are only two things that can induce *men* to practice midwifery; and these are, first, that it may be necessary for a man so to do, in order to get his living; and, secondly, if he be a benevolent man, he will most gladly relieve suffering, if he can be the means of doing so. And do not physicians, almost to a man, the world over, attend the poor in childbirth, gladly and willingly, when they know they are to receive from them no pay whatever, except such as God gives them?

Is it said that man-midwifery leads to licentiousness? I answer, go to the veterans of the "godlike art"—those who have toiled long and hard in their calling, and who will not consent to relinquish it so long as their powers of body will allow them to pursue it, and ask them to tell you candidly, if the practice of midwifery has made them bad and unprincipled men? Mark, they will tell you, "No; but rather our knowledge of woman's sufferings,

and the pains and perils which we have but too well and sadly often learned that it is her lot to endure, have chastened us, and made us more what we ought to be."

Suppose that now and then it may happen—as a rare exception to the rule, it is true—that a physician conducts himself in a lascivious way before a patient, are we for this reason to call all physicians bad men? Do we not also hear of bad men among clergymen? And because there is now and then a bad one in the clerical profession, are we to scout them altogether, and say they shall never preach to or converse with women?

I wish, therefore, to be understood, that I speak in strong terms against the foolishness of the cry we so often hear against man-midwifery. On the other hand, too, let it be understood, that I never have and never shall object to female midwives; the more of them the better, if they become properly qualified, and women choose. I know something of the benevolence, sympathy, kindness, and assiduity of woman in her care of the sick. We attend a man at a New York boarding house, lonely in the world, without wife or children, or brother or sister to console him in the day of his disease. Death lays hold of him in the morning, and takes away his senses, and all the long day, as he still breathes on, with the cold sweat upon him, the women of the house gather about him, watching anxiously, tearfully, for the last death agony to come. All this have I witnessed, here in this city of New York; and far be it from *me* to withhold from WOMAN any share which it may be her duty or privilege to perform in that noblest of earth's callings, the attendance of the sick.

I do not, however, wish to conceal the fact, that I do not believe woman will ever, as a general thing, in any well-regulated society, practice the healing art. I give her all credit for her purer and more devoted sympathy with the sick, for her kindness and benevolence, as well as for her capability of acquiring science. But I do not believe that it is her mission to pursue that toilsome and life-wearing calling, which requires, oftentimes, the exercise of all the sterner faculties and powers, mental and physical, of the stronger sex. In the city of Paris, women, so far as I am acquainted, have had equal medical privileges to those of men; and yet the great proportion of medical practice is done by the latter.

In referring to the following letters it will be seen that I have presented some very striking facts illustrative of the effects of water in childbirth. But it may be asked — Do you have no *unfavorable* cases in water-treatment? I answer, yes. A few months ago it was my lot to advise a most worthy lady, of active and industrious habits, in this city, in her third pregnancy, and to attend her in childbirth. Owing to mal-position of the child, the face presenting forward instead of backward, as it should, to answer to the wider part of the pelvis, the labor was a very severe and protracted one. She suffered incomparably more than she had in both her former confinements. Expecting to have to resort to the use of instruments, I went for them late in the night; but before returning nature had done her own work. The child's head, however, was dreadfully misshapen in consequence of the wrong presentation, and the result was, it soon had a sort of convulsions, which, after some weeks of suffering, carried it off.

Another sad case, too, has happened while I am preparing these letters for the press. A most estimable lady of this city, in whom I had for years felt a deep interest, and who was one of the most devoted friends the Water-Cure has ever had, was for the third time pregnant. She had probably always been scrofulous, and a good deal subject to disease. She had, moreover, an old rupture, which at this time was so bad she could not sit up. Such, at least, was her state, for the most part, during the last three or four months she lived. She became very weak, and at about the end of the sixth month of her period she sank. I had not the whole charge of her case, it is true, toward the last, for she was willing, at the most urgent solicitation of her friends, to resort to means which I could not approve of. My candid opinion is, that she would have died, whatever treatment might have been pursued.

If my words are to be believed, it will be seen that I have very great confidence in the Water-Cure. But if I know my own heart, I would in nowise overstate the truth; nor would I knowingly, for my right hand and my left, say that which would mislead either myself or my readers, or make us presumptuous toward that Being who alone can sustain us, and whose paternal care is ever over us, giving us every thing we have—mercy, blessing, and health.

I have not in the following letters spoken particularly of the treatment of spinal disorders. The subject is a most fruitful one, upon which a volume might be written. You are already, many of you, aware of the fact, that almost all of the young ladies who attend boarding-schools nowadays are more or less crooked in the spinal column. The ill hygienic management they receive from birth onward at home, and their too great confinement in school-rooms, too often badly ventilated, renders the young and growing body of the girl too feeble to maintain itself in its proper position. The brain is likewise too much drawn upon in the mental exercises, which also causes debility of the bodily structures.

In after-life, as well, we see among females a great deal of complaining nowadays in regard to the spine. How few of the sex, indeed, do not, sooner or later, suffer with some form of spinal infirmity! True, in many cases the difficulty at the vertebral column is only sympathetic with some other disorder, as of the womb, stomach, bowels, etc. Yet spinal disease, in some of its protean forms, is a very common complaint.

In all cases of this kind, the water-treatment will be found an invaluable remedy; not that all can be cured—for that is not possible by any earthly means—but as a remedy for either cure, prevention, or palliation, water is the greatest of all remedies for spinal disease. In multitudes of instances, when the patient cannot walk, the new method proves an effectual one. In other cases, palliation is all that can be hoped for.

In multitudes of instances of so-called spinal disease, all that is needed is to establish the general health. Patients have often wondered how it is that by simply pursuing a course of *general* treatment the *local* part becomes so much benefited. The reason why a weak spine is often cured without any special applications to the part, appears evident when we consider that the local weakness is merely symptomatic of the general health.

J. S.

No. 98 Fourth Avenue, New York, 1852.

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LETTERS TO WOMEN

LETTER I.

HISTORY OF MIDWIFERY.

The Art of Midwifery in Ancient and Modern Times—To what extent may the Perils of Childbirth be Lessened?

MIDWIFERY is the art of aiding women in childbirth. In some mode—rude, simple, or complex—it has been practiced in all ages of the world. According to the records of medicine, however, the great mass of the human family has been born and brought up without the aid of the so-called obstetrical science of modern times. The ruder nations anciently, as well as the savage nations in later times, appear to have exhibited, practically at least, a much greater confidence in the prophylactic and healing powers of nature than we see among the more civilized and enlightened portions of our race.

But let us, for a little, glance at midwifery as it has existed at different periods of the world.

We read in the Book of Genesis, chapter thirty-fifth, that as Jacob and Rachel were journeying from Bethel, Rachel travailed, and had a hard labor.

"And it came to pass, when she was in hard labor, that the midwife said to her, Fear not, thou shalt bear this son also.

"And it came to pass, as her soul was departing (for she died), that she called his name Ben-oni: but his father called him Benjamin.

"And Rachel died, and was buried in the way to Ephrath, which is Bethlehem."

In the twenty-fifth chapter of Genesis, Moses informs us that Rebekah, who had been barren, conceived, being the wife of Isaac.

"And when her days to be delivered were fulfilled, behold, there were twins in her womb.

"And the first was born red, all over like a hairy garment: and they called his name Esau.

"And after that his brother was born, and his hand took hold on Esau's heel: and his name was called Jacob."

The birth in this case appears to have been a natural one, in which the children followed each other in quick succession.

We read also in the thirty-eighth chapter of Genesis, the case of Tamar, who bore twins, being attended by a midwife.

"And it came to pass, in the time of her travail, that, behold, twins were in her womb.

"And it came to pass, when she travailed, that the one put out his hand; and the midwife took and bound upon his hand a scarlet thread, saying, This came out first.

"And it came to pass, as he drew back his hand, that, behold, his brother came out; and she said, How hast thou broken forth? this breach be upon thee: therefore his name was called Pharez.

"And afterward came out his brother that had the scarlet thread upon his hand; and his name was called Zarah."

Some have supposed that this was a case of spontaneous evolution of the fetus, a thing which has been known to occur in modern practice, proving that nature sometimes works in a very wonderful manner in these circumstances. It is certainly a very singular fact for the hand of one child to recede after coming into the world, and the other child to be born first.

The Hebrew women, when in captivity, had, as we read, two midwifes, Shiphrah and Puah. These were commanded by Pharaoh, that when they did the office of a midwife to the Hebrew women, if a son should be born, they should kill him. But the midwives feared God, and did not as the king of Egypt had commanded them, but saved the male children alive.

The period of suckling appears to have been prolonged, in Bible times, to a much greater length than it is in modern times. In the Apocrypha, the woman says to the son, "I, who gave thee suck *three* years."

Profane writers, prior to the time of Hippocrates, give little account of the art of midwifery; and from the time in which the Father of Medicine lived, down to a comparatively recent date, little was said or known concerning it as an art.

Dr. Francis informs us, that toward the latter part of the sixteenth century, a Dr. Raynald published in England a work, the first of the kind that had appeared in that country, which he called the "Garden of Lying-in Women and Midwives." It was afterward translated into the Latin, and most of the modern languages, and became the

manual of instruction for females. "The popular prejudice was so great at that time in favor of female practitioners," observes Dr. Francis, "that an unfortunate physician of Hamburgh was publicly branded, whom curiosity had induced to be present at a delivery, in female attire."

Still quoting from Dr. Francis, we learn, concerning this old work, the following particulars: "In his prologue to women readers, he states that the byrth of mankynd doth mostly concern and touch only women, and that he hath declined nothing at all from the steps of his Latin author, but that many things are newly added to this boke. In his first part of the work he gives the anatomy of the inward parts of women; in the second, he declares the divers sorts and manners of the deliverance or birth of mankind. In the third, he treats of the election and choice, by signs and tokens, of a good nurse, which may foster and bring up the child, being born. In the fourth and last, he communes of conception, with the causes hindering or furthering the same, showing the councils and remedies whereby the unfruitful may be made fruitful, and the impediments of conception, by virtue of medicines, removed. He solicits the favor of the reader to good acceptance of his labor and pains spent in compiling these aforesaid matters. He invocates all the nine muses of Helicon, with their poetical spirit, to breathe over this his boke, against the strange, perverse, and wayward wits who would desire this performance to be suppressed and kept in darkness, rather than that it be sent forth into the light. There is nothing, he says, that may not be abused and turned to evil, even meat and drink; but that to the good every thing turneth to good. He is fearful that the

medicines he recommends may be abused; that light persons ought not to read his boke, and some would that neither honest nor dishonest should have it. He adds, every one may read it; because no one shall become by it either lewd, unhappy, or knavish. The consideration which prompted the publication he declares to be on account of the manifold, daily, and imminent dangers, which all manner of women, of what estate or degree soever they be, in their labors, do sustain and abide, even with peril of their lives. He considers it to be a charitable and laudable deed, and thankfully to be accepted of all honorable and other honest matrons, if this little treatise were made to speak English, as it hath been long taught to speak Dutch, French, Spanish, and divers other languages.

"He enjoins that ladies and gentlemen have this boke in their hands, and cause such parts of it to be read before the midwife and the rest of the women present in labor, whereby the laboring woman may be greatly comforted and alleviated in her travail. And though some midwives would have this boke forbidden, yet, he adds, the good need not be offended, though the evil-hearted endeavored to make it that it was nothing worth, and that he hath exposed the secrets and privities of women, so as that even boys read his boke openly, as the tales of Robin Hood. Notwithstanding all these accusations, he trusts that all good midwives would be glad of his work, because of their familiar knowledge, and that others of them such as could read, would read it themselves, and laud it as its merits deserve."

In regard to the employment of men as midwives in France, it appears that in 1663, the Duchess de Villiers was delivered by the assistance of Julien Clement, a pro-

fessor of surgery in Paris. He was soon after appointed to the office of midwife to the Princess of France.

The princess, it is said, had some scruples in regard to employing Clement. As she desired it might be kept a profound secret, she sent for him, he being a surgeon of great reputation; and he was conducted with the greatest secrecy into a house where the lady was, with her head covered with a hood. The same surgeon was employed in subsequent labors of the same lady, and the princesses made use of surgeons on similar occasions; and as soon as it became fashionable, the name of *accoucheur* was invented to signify that class of surgeons. Foreign countries soon adopted the custom, and likewise the name of *accoucheurs*, for they had no such term in their own language; but in Great Britain they have more generally been termed midwives.

Dr. William Shippen, of Philadelphia, a very worthy citizen and exemplary man, had the honor of being the first teacher of midwifery in the United States. In London he enjoyed the advantages of the instructions of the celebrated Dr. William Hunter, and on his return to his native country he was chosen professor of anatomy in the earliest of its medical schools, the University of Pennsylvania. His lectures on obstetrics, like those upon anatomy and surgery, are said to have evinced great ability and command over his auditory. His first course on midwifery was delivered in 1762, and was attended by only ten pupils. He, however, lived to give instructions to a class of two hundred and fifty. This leads me to the reflection, will those who now advocate the employment of females principally in midwifery, even when the country has grown many times larger in numbers than it

then was, meet with one half the success that Dr. Shippen did? If so, may it be, and Heaven speed the right.

In the year 1767 the first medical school of New York was founded, under the auspices of Kings, now Columbia College. Among the appointments to that institution was Dr. John V. B. Tennant as professor of obstetrics. It is said that he was a very worthy man and of good reputation. He died at an early age, of the yellow fever, in the West Indies, where he had gone for his health. Since the time of Drs. Shippen and Tennant, midwifery has been taught as an important part of medical education in all of the medical colleges in the United States.

In China the practice of midwifery is regulated in a very good way certainly; and on the whole, the Chinese custom is to be regarded as a safe one. It, however, recognizes the superiority of man's intellect, nerve, mechanical skill, to that of woman's, in scenes of trial and danger. The custom is this: Female midwives attend in all ordinary cases; but there is a class of obstetric surgeons which is devoted exclusively to this department, is perfectly skilled in the use of instruments, and the management of every possible difficulty. One of these is located in each particular district, having a given number of inhabitants, and after a woman has been a certain number of hours in labor, the child not being yet born, the midwife is required by law to call in the obstetric surgeon. Thus it is, I repeat, that man's superiority over woman's, in ability to perform great and difficult operations, is recognized even in China. Nor is it to be supposed that it is in the most difficult cases only that the male practitioner is called in that country, because many a woman has, on the whole, a safe labor which is yet a good deal protracted.

It is said that in Russia the obstetric branch of the medical art is practiced for the most part by females. They are educated at the government's expense, and are said to be very skillful in their art. We are not, however, in the habit of looking to Russia as a country eminent in civilization and the arts.

It is admitted that a great majority of the human family, from the beginning of the world down, have been born by the aid of female midwives only, or without there being any assistant whatever at the birth, as is still the case with some of the savage tribes. At the present day even, of all births that take place in the world at large, probably not one out of twenty is superintended by a male practitioner. But all of this proves nothing in regard to the question, as to whether it is better for men or women to be employed in such practice. It proves to us the competency of nature to do, as a general thing, her own work. But to say that it proves that males should never practice midwifery, would be as absurd as to affirm that railroads, steamships, and magnetic telegraphs ought never to be brought into use. But I have already spoken on this subject in my introductory letter, and need not here enlarge upon it.

The question regarding the extent to which the pains and perils of childbirth may be modified by the voluntary habits of individuals and nations, and by the appliances of art, is one of the greatest importance to society, a subject which has been probably more neglected than any other in both medical and scholastic lore.

To prove that the evils and dangers attending child birth, even among the most civilized and enlightened

portions of the human family, may be brought to a great extent within the range of man's control, is the object of the following remarks.

Let us look first at the habits and condition of the aborigines of our own country.

The state of society among the Indians necessarily excludes the influence of many of those passions which are known to cause bodily derangement. If an Indian becomes angry, the turbulent effects of his passion are hushed in deep and lasting resentment. Envy and ambition also are, for the most part, excluded by the equality of savage life. "The weakness of love," says Dr. Adam Smith, "which is so much indulged in ages of humanity and politeness, is regarded among savages as the most unpardonable effeminacy. A young man would think himself disgraced forever if he showed the least preference of one woman above another, or did not express the most complete indifference, both about the time when, and the person to whom he was to be married." Thus the savage state, although being in many respects far from a truly natural one, exempts the individuals of both sexes from those violent and lasting diseases which are well known to arise from excesses in matters pertaining to the sexual and marital relations.

It is to be observed, also, that marriages do not, as a general fact, take place among the aborigines before the period at which the body has attained its full vigor. The men seldom marry before thirty, and the women before twenty years of age. Abortion, one of the most frequent mishaps with women of civilized life, is almost entirely unknown among the Indians. They nurse their children for two years, and often longer, and during this whole

period they utterly refuse the embraces of the opposite sex. The manual labor to which they are constantly subjected, and their hardy habits generally, tend powerfully to invigorate their bodies, and although they are, during pregnancy, exempted from the more laborious parts of duty, they are always habitually active. Nature is their only midwife; and according to Dr. Rush, "each woman is delivered in a private cabin, without so much as one of her own sex to attend her. After washing herself in cold water, she returns soon to the usual employments of her station;" so that, according to the authority just quoted, "she knows nothing of those accidents which proceed from the carelessness or ill-management of midwives, or those weaknesses which arise from a month's confinement in a warm room."

It is, indeed, said on good authority, that if, during journeys, the Indian woman is taken in labor, she merely falls back for a little on her way in the forest, delivers herself, and then shortly makes up to her companions with her new-born child on her back.

The most natural state of the female constitution, and one which is connected with the best and firmest health, is that of pregnancy and nursing; and it is a remarkable fact, that there is seldom a period during the interval between marriage and the cessation of the menstrual function in which the Indian women are not either pregnant or giving suck.

Among other nations than the aborigines of our own country, we find also striking examples of the freedom from suffering with which childbirth is endured. Thus, according to Stephenson's "Twenty Years' Residence in South America," "among the Araucanian Indians of South

America, a mother, immediately on her delivery, takes her child, and going down to the nearest stream of water, washes herself and it, and returns to the usual labors of her station."

The women of Otaheite, according to "A Description of Pitcairn's Island and its Inhabitants," have all learned the art of midwifery. Childbirth generally takes place in the night time, labor lasting seldom more than five hours. It is always safe, and no cases of twins occur. Miscarriages, too, are unknown among them, except from accident. Infants are generally bathed in cold water (which in that latitude must be only moderately cool) three times a day, and are sometimes not weaned for three or four years; and when they are taken from the breast they are fed upon ripe plantains and boiled taro-root rubbed into a paste. Nothing is more extraordinary in the history of the island than the uniform good health of the children; the teething is easily got over; they have no bowel complaints, and are exempt from those contagious diseases which affect children in more civilized countries. Neither the young nor the old are ever vaccinated. "The natives of Otaheite," says Captain Cook, "both men and women, constantly wash their whole bodies in running water three times every day; once as soon as they rise in the morning, once at noon, and again before they sleep at night, whether the sea or river be near them or at a distance. They wash not only the mouth, but the hands, at their meals, almost between every morsel; and their clothes, as well as their persons, are kept without spot or stain." "The women," according to a missionary writing of this people in 1797, "have black and sparkling eyes, teeth white and even, skin thin,

soft, and delicate, limbs finely turned; their faces are never darkened with a scowl, or covered with a cloud of sullenness or suspicion; their manners are affable and engaging, they step easy, firm, and graceful, their behavior free and unguarded; always boundless in generosity to each other and to strangers; their tempers mild, gentle, and unaffected; slow to take offense, easily pacified, and seldom retaining resentment or revenge, whatever provocation they may have received. Their arms and hands are very delicately formed, and though they go barefooted, their feet are not coarse and spreading. In private life they are affectionate, tender, and obedient to their husbands, and uncommonly fond of their children; they nurse them with the utmost care, and are particularly attentive to keep their infants' limbs supple and straight; a cripple is hardly ever seen among them in early life; a sickly child is never known; any thing resembling it would reflect the highest disgrace on the mother."

A very worthy medical friend who spent some time at New Zealand in 1839, gave the writer lately the following particulars concerning midwifery, as practiced among the inhabitants of that island.

Women (who generally followed out-door active employments a considerable portion of the day), as soon as they experience the first symptoms of labor, retire some little distance from the settlements, among the *fern* (a native growth resembling bushes in the United States), by the side of a stream of pure water. Within about one hour not unfrequently the mother returns with her new-born infant, both herself and it having been previously washed in the pure stream. The child is never bound with clothes or swathed, but for a few days at first it is dressed in one

light flaxen garment. This is placed loosely about the trunk of the body, the extremities being left wholly free and exposed to the action of air and light, and after a few days, they are left entirely naked, being allowed freely to roll about and exercise their limbs upon a mat of smooth texture. It is left much of the time in the open air, but not exposed to the sun's rays. At other times, when the mothers are at work, planting or hoeing in the ground, they are allowed, even when not more than one week old, to roll among the potatoes and corn. They are often taken to the streams of pure water with which the island abounds, for the purpose of being bathed. The mothers, in consequence of their almost constant labor and exercise in the open air, and their simple habits generally, are remarkably strong and muscular, and free from deformity and disease. Their food, particularly of the inland parts (where the finest specimens of physical development are to be found), consists almost wholly of the vegetable productions of the earth, such as corn, pumpkins, potatoes, common and sweet, peaches, and various other fruits, all of which articles grow to great perfection on the island. The New Zealanders wear but a single garment of flax, sometimes thrown loosely over the shoulders, and sometimes only about the loins. They have a great dislike to head-dresses, and never wear them.

In civilized countries, also, we find among the laboring classes, some remarkable examples of the general safety with which childbirth is endured; and it has often been remarked among the legal profession, that in cases of concealment and child-murder, a most wonderful degree of strength and capability of exertion is often exhibited. There is, it is true, in cases of this kind, a powerful stim-

ulant for extra exertion; but even admitting this consideration in its full force, these examples afford a striking proof of what the human constitution is able to endure, even under many untoward circumstances.

Mr. Alison mentions the case of one Catharine Butler, or Anderson, of Aberdeen, Scotland, who in the spring of 1829, walked in two or three days after delivery, in a single day, with her child on her back, from Inverury to Huntly, a distance of twenty-eight miles; and the same author also remarks, "that it is not unusual to find women engaged in reaping, retire to a little distance, effect their delivery by themselves, return to their fellow-laborers, and go on with their work during the remainder of the day, without any change of appearance but looking a little paler and thinner. Such a fact," Mr. Alison observes, "occurred in the case of Jean Smith, of Ayr, in the spring of 1824."

Among the peasant women of the mountains in Austrian Silesia, childbirth is regarded in a very different light from that among the women of our own country. They are exceedingly hardy and robust, and seem to care as little about giving birth to a child as if it were an every-day occurrence. Physicians are very rarely employed on such occasions in that country, as I learned when there by frequent inquiries. In the winter of 1848, when I was last at Graefenberg, the wife of the proprietor of the *Hotel de Graefenberg*, a very good and worthy woman, of the middling class, gave birth to her first child, without the aid of any one save her husband and a female attendant; and, although the labor was a severe and protracted one, lasting a day and a half, she preferred to have no physician, although one of skill and experience lived next

door to them, and who was, moreover, a particular friend of the parties. These German peasants appear to regard labor as it should be, a *natural process*, and the degree of patience for which the German character is noted, is nowhere more strikingly exemplified than in the matter of childbirth.

Witnessing, then, the great numbers of facts that may be gleaned from the history of savage and civilized nations, concerning the safety with which childbirth and its attending circumstances may be endured by persons in the lower walks of life, it becomes a very important practical question as to what may be accomplished in the higher grades of society. To prove that there is need of a great and thorough reform, both in the habits of society generally, and in the practice of the healing art, I will bring forward some facts, which have occurred in my own experience as a healer of the sick during the past seven years. It has fallen to my lot to study the subject of midwifery with more earnestness and satisfaction to myself, than any other with which my mind has been engaged. It was, moreover, necessary for me to strike out a course of my own, a course which has been attended by a degree of success which has far exceeded the most sanguine expectations of my younger years.

LETTER II.

OF MENSTRUATION.

Puberty—The Menstrual Discharge—The Marriageable Age.

I AM now to write you on a most important subject; I mean that which refers to puberty—the menstrual function, and what we call the marriageable age. I think you will agree with me in thinking that there is no period of the whole life of the female which should give a parent more anxiety and solicitude than the one of which I am now to speak. I trust, therefore, that you will give good attention to all I may say on so important a matter, and learn all that you can about it, from whatever source.

Puberty, or the marriageable age of woman, occurs at a somewhat different age in different parts of the world. In temperate climates, the period of puberty may be reckoned as being at from the twelfth to the sixteenth year. In tropical climates it appears to be considerably earlier, as from eight to twelve; and in the frozen regions later than all, from fifteen to twenty years. It has been said that the Turkish women are capable of becoming mothers at the age of seven or eight years; but of this there is at least room for doubt.

There are other circumstances than those of climate that influence the coming on of the period of puberty. Those that lead habitually an inactive life, a life of leisure and

luxury, so called; those who, without sufficiently attending to physical and out-door exercise, practice much the imitative arts, such as painting and music; those who frequent theaters, balls, and parties, late at night; read novels and other works that powerfully excite the imagination and feelings; and especially such as are so unfortunate as to have access to obscene pictures and books, arrive at the season of puberty earlier than others.

So also the use of rich, concentrated, and highly stimulating food and drinks, render the young, of whichever sex, far more precocious, in regard to puberty, than a plain and unstimulating diet. Temperance and frugality, with simplicity of manners, especially if the individual lead a rural, or country life, are always more favorable in refer ence to the coming on of this important period.

Previously to the period of puberty, the general organization of the male and female progresses very much alike. The tastes and habits, however, vary. The little girl is fond of her doll-babies and play-houses, while the boy exhibits a liking for more manly sports. There is, however, no great difference, up to this time, in the physical frame of the two sexes; but as the period of puberty approaches, there is manifested a great difference in the two beings. In the language of an eloquent writer, Velpeau, "the young girl becomes more timid and reserved, her form becomes rounded, her voice alters but to take on a softer and more harmonious tone, and her bosom is developed; the cellular tissue extends from the front of the breast and the hypogastrium, as from two centers, toward the neck, while at the same time it proceeds to form a soft cushion for the upper part of the limbs. Her eyes, which are at once brilliant and languishing, express

commingled desires, fears, and tenderness; the sensations she experiences, and the sense of her own weakness, are the reasons why she no longer dares to approach the companions of her childhood but with a downcast look. On the other hand, the gentle modesty that animates her countenance, and the engaging graces of her demeanor, soon disclose a power, the existence of which she never suspected, and which renders it true to say that the marriageable age in the softer sex is the spring-tide of nature, and the season of the pleasures. But a new function—the catamenial—the absolute compass of good or bad health in woman—is established, with more or less difficulty, in the midst of this great revolution; and by the disorders and accidents which it involves, sometimes dashes with bitterness those happy seasons to which it should naturally serve as a prelude. Such are the changes that go on in the female constitution at one of the most important and critical seasons that can occur in the female's life."

The period at which woman may be said truly to arrive at her womanhood, is certainly, in the present state of artificial life, fraught with many dangers to the future health. But, on the other hand, we have proof the most positive and indubitable—the proof of facts—that if young girls are brought up in a simple, judicious manner, and if all their habits—social, moral, physiological, and hygienic—be correct, there can be, as a general law, no danger at the coming on of puberty. With judicious management throughout, the girl will pass through this change with as little difficulty, as little danger and derangement of the general health, as occurs at any other season of her whole life. Although the change is a great one, it is yet within

the order of nature, a fact which we should always bear in mind.

The foregoing remarks on puberty lead me necessarily to speak of the menstrual function.

AGE AT WHICH THE MENSES COMMENCE.

In Greece and other hot countries, it is said that the menses appear usually at nine or ten years of age. In the more temperate climates generally, as in Great Britain and our own country, the average age at which menstruation commences is from fourteen to fifteen years.

Habits of life, also, have something to do with the evolution of this function. "The early or late appearance of the menses," says Dr. Denman, "may depend upon the climate, the constitution, the delicacy and hardness of life, and upon the manners of those with whom young women converse." High living, the use of stimulating food and drinks, living in populous cities, the habit of frequenting balls and theaters, and of being taught early in the habits of civic life, have all, doubtless, a considerabl eeffect in rendering girls precocious as to menstruation. In Paris, girls are occasionally observed to become regular at ten, eleven, and twelve years. Velpeau knew one that menstruated at nine and a half years; another at ten and a half; and one young woman who at fourteen was as tall and robust as the majority of women at twenty, and had been entirely in a state of puberty since she was eight and a half years old.

On the other hand, a country life and occupation, simplicity of manners, and frugal regimen, appear to be circumstances which procrastinate, to a greater or less extent, the

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coming on of the menstrual function. It is said that with the North American Indians this epoch does not commence until from the eighteenth to the twentieth year.

A table showing the ages at which the menses appeared in 450 cases, as quoted by Dr. Maunsel, of Dublin, as having been given by Mr. Robertson in the Edinburgh Medical and Surgical Journal, is as follows:

10	first menstruated at	11 years	57	first menstruated at	17 years
19	"	12 "	26	"	18 "
53	"	13 "	23	"	19 "
85	"	14 "	4	"	20 "
97	"	15 "			
76	"	16 "	450 total.		

According to this table, it will be seen that with the largest number, namely, 97, menstruation commenced at the age of fifteen; and nearly as many at sixteen as fourteen; so that we are to regard the average age in such a climate as Great Britain, Germany, France, and the United States, as being from fourteen to fifteen years.

Dr. Meigs, of Philadelphia, gives a table on the authority of Drs. Boismont, of Paris, and Lee, of London, showing the ages at which 1,781 women began to menstruate, in France and England, as follows:

110	first menstruat. at	11 years	144	first menstruat. at	18 years
144	"	12 "	72	"	19 "
256	"	13 "	40	"	20 "
360	"	14 "			
366	"	15 "	1776 total.		
284	"	16 "			

At what age the remaining five first menstruated, the table does not show. On the whole, its results may be regarded as very similar to those of Mr. Robertson's table, before given.

Dr. Guy, of London, gives a table of the ages at which menstruation commenced of 5,062 cases, 2,905 being of England, 1,825 of France, 332 of Germany; the total numbers being as follow:

1	first menstruat. at	5	years	751	first menstruat. at	16	years
1	"	7	"	574	"	17	"
2	"	8	"	379	"	18	"
15	"	9	"	173	"	19	"
48	"	10	"	111	"	20	"
263	"	11	"	29	"	21	"
368	"	12	"	14	"	22	"
554	"	13	"	10	"	23	"
839	"	14	"	4	"	24	"
926	"	15	"				

There is one topic connected with this subject which I cannot here enlarge upon, but which I will simply refer to by quoting the remarks of a certain author who has given much attention to the subject.

Dr. Ray, author of a work on the "Medical Jurisprudence of Insanity," observes, "that the evolution of the sexual functions is very often attended by more or less constitutional disturbance, especially in the female sex, is now a well-established physiological truth. The shock seems to be felt chiefly by the nervous system, which experiences almost every form of irritation, varying in severity from the slightest hysteric symptoms to tetanus, St. Vitus' dance, and epilepsy." "And when we bear in mind, also, that general mania is sometimes produced by this great physiological change," continues this author, "it cannot be deemed an extraordinary fact that partial mania, that partial acts, inciting to acts of incendiarism or murder, should be one of its effects."

LETTER III.

OF MENSTRUATION.

The Menses—Names—Source—Commencement—Periodicity—Nature—Quantity of the Menstrual Discharge.

In my last letter, speaking of the menstrual discharge in females, I omitted to mention the several names and expressions by which the function is known. Those by which it is more commonly designated are "*menses*" (meaning a month), *monthlies*, *monthly discharge*, *show*, *being regular*, *regular discharge*, *flowers*, *turns*, *monthly turns*, *regular periods*, *monthly periods*, *courses*, *monthly courses*, *catamenia*, *catamenial discharge*, etc. We read in the Bible that Rachel said to her father, "Let it not displease my lord that I cannot rise up before thee, *for the custom of women is upon me.*" And we also read of Sarah, that a son was promised to her when "she was old and well stricken in age, and when it had *ceased to be with her after the manner of women.*"

Menstruation, then, commences at puberty and ceases with fecundity, and generally during the period of giving suck. As a general fact, women who experience no menstruation can never bear children.

COMMENCEMENT OF THE MENSTRUAL DISCHARGE.

This is usually preceded by more or less disturbance

of the general system. There may be a general excitement or a depression, or the two in alternation. There is often experienced a sense of weight in the loins, accompanied sometimes by a feeling of tension in the epigastrium, or pit of the stomach, with pain in different parts of the body. There is also general uneasiness, lassitude of the body, and irritableness of the temper and feelings. With these symptoms, a mucous discharge, more or less yellow, takes place. This, after a time, becomes streaked with blood; yet many experience no particular symptoms at this time, and such, doubtless, would generally be the case were the laws of life and health habitually obeyed. In general, menstruation does not become regular until after some months have elapsed from its commencement.

The health should be carefully guarded at the coming on of menstruation. Perhaps at no one period of woman's life is attention to the laws of health more requisite than here. A little mismanagement may now lay the foundation for life-long suffering and disease.

Bathing, a full share of exercise in the open air, particular attention to diet, and, in short, all the hygienic means that can be brought to bear in keeping up a good condition of the general health, is the course to be pursued. Cheerfulness, contentment, and a pleasing frame of mind, are very desirable at this time. Severe study and unpleasant discourse, of whatever kind, should not now be undertaken.

Neither should parents be too tender of their daughters at this period. Especially should the reading of novels and books of an exciting nature, the attendance of balls, parties, theaters, etc., be avoided; and persons of what-

ever sex should be particularly careful to treat those of this age with the utmost kindness in every respect. One unkind look, one harsh expression, or one angry word from a parent or near friend, may be the means of affecting severely the individual's health.

It has been a question with some, as to whether menstruation is strictly a natural function to the human system. So far as we know, it has occurred in all climates and in all periods of time. We read in the Levitical law, "If a woman have an issue of blood in her flesh, that she be put away seven days, and that whoever toucheth her shall be unclean." The cases of Rachel and of Sarah every one may recollect. Naturalists tell us, too, that some of the monkey tribes, or species of animals nearest resembling man, have symptoms of this kind. Still there have been those who believed that this function has come upon the human race in consequence of great and long-continued physical transgressions, continued, perhaps, through ages and ages, until at length it took on the form of an apparently natural function.

SOURCE OF THE MENSES.

From whence comes the menstrual discharge? This has been a question which has caused a good deal of dispute on the part of some.

The majority of writers, of all ages, agree in regarding the menstrual flow as coming from the womb; yet some have held that it issues only from the vagina and more external parts. This latter supposition cannot hold good except, possibly, now and then, as an exception to the general rule. Blood may exude from any part of the

body, from the vagina and external organs of generation, as well as from the womb. But this organ, beyond doubt, is the great and principal source of the menstrual discharge.

PERIODICITY.

The periodicity of this function is remarkable. With those who are regular, menstruation occurs every twenty-eight or twenty-nine days, or once a lunar month. There is, however, considerable variation from this rule. Some having menstruation twice a year appear to enjoy very good health. Some have asserted that the frequency of menstruation varies considerably according to climate. Linnæus, it seems, saw women in Lapland who menstruated about once a year. Dr. Denman speaks of the inhabitants of Lapland, where women do not menstruate till they arrive at mature age, and then only in small quantities and at long intervals, and sometimes only in summer. But if they do not menstruate according to the genius of their country, it is said they suffer equal inconvenience, as in warmer climates, where the quantity discharged is much greater and the period shorter.

NATURE OF THE MENSTRUAL DISCHARGE.

The question as to the nature of the menstrual discharge, has attracted a good deal of attention among physiologists and others. Savage nations, and perhaps some others in the world who would claim a higher place in the range of human civilization and improvement, have entertained singular notions concerning it.

Superstition has been carried so far in this matter, that

if a man should meet with the great misfortune of dropping his pipe, and breaking it, the accident would be imputed to its having been lighted at the hut of a female who was at the time menstruating.

So, also, it has been regarded that if a woman, during this period, should walk three times around a garden, all the flowers would be destroyed, and the caterpillars killed in it.

A North American Indian, according to Dr. Gooch, said that if the saliva of a menstruating virgin were applied to the bronchocele of a male, it would cure it.

Every one has read the strict regulations recorded in the Old Testament concerning this function. Thus in the Levitical law we read:

"And if a woman shall have an issue, and her issue in her flesh be blood, she shall be put apart seven days; and whoever toucheth her, shall be unclean until the evening.

"And every thing that she lieth upon in her separation shall be unclean: every thing also that she sitteth upon shall be unclean.

"And whoever toucheth her bed shall wash his clothes, and bathe himself in water, and be unclean until the evening.

"And whoever toucheth any thing that she sat upon, shall wash his clothes, and bathe himself in water, and be unclean until the evening.

"And if it be on her bed, or on any thing on which she sitteth, when he toucheth it, he shall be unclean until the evening.

"And if any man shall lie with her at all, and her flowers be upon him, he shall be unclean seven days; and all the bed on which he lieth shall be unclean.

"And if the woman shall have an issue of her blood many days out of the time of her separation, or if it shall run beyond the time of her separation, all the days of the issue of her uncleanness shall be as the days of her separation: she shall be unclean.

"Every bed on which she lieth all the days of her issue shall be to her as the bed of her separation; and whatever she sitteth upon shall be unclean as the uncleanness of her separation.

"And whoever touches those things shall be unclean, and shall wash his clothes, and bathe himself in water, and be unclean until the evening.

"But if she shall be cleansed of her issue, then she shall number to herself seven days, and after that she shall be clean."

Thus we see how particular, in regard to the menstrual function, were those good old people of the Mosaic time. No doubt many at this *enlightened* age would say that they carried things to an extreme.

I cannot but think, however, that it would be a great improvement if our modern ladies, some of them, at least, would be one half as careful in regard to cleanliness as the Jewish people were.

The Romans believed the menstrual fluid to be endowed with the most noxious qualities. It was, in short, regarded as a dangerous poison, the exhalations of which alone are sufficient to turn all the sauces of a whole kitchen, the cheeses of a whole diary, and make a whole family sick, and wilt all the flowers of a parterre.

If the ancients went to an extreme on one side in this matter, there is, perhaps, equal danger with the moderns of going quite as far in the opposite way. Certain it is,

that too great pains cannot be taken in reference to this period. It is generally true that old proverbs have at least some truth on which they were originally founded. There was wisdom in the Levitical law, so strict in regard to the purification of women at this period.

Does the menstrual discharge consist of blood? This is a question concerning which physiologists, both ancient and modern, have put forth many speculations, and many experiments have been instituted to settle the matter.

Hippocrates regarded the menstrual fluid like the blood of a slaughtered animal, or, in other words, blood.

Aristotle was of the same notion, comparing it to the blood which flows from a simple wound. It may be a question whether pure blood is discharged; but that the fluid contains the most important properties of blood, is a fact settled beyond dispute.

QUANTITY.

The quantity of menstrual discharge has been a matter of inquiry on the part of medical men.

It would be a very difficult task, if, indeed, not impossible, to determine in any given case the precise amount of menstrual fluid discharged at a single period. An approximation to the general rule is all that can be reasonably looked for in investigations of this kind.

In cold regions, the discharge is more scanty; in hot, more profuse; and in temperate climates, a medium quantity is observed.

Dr. Gooch, in his "Treatise on Midwifery," quotes De Haen as having made inquiries among poor women, who told him that they used only one cloth at the period,

which, when wet, was dried, and then applied again. He then took a similar napkin, dipped it in blood, dried it, and applied the same. This experiment he tried repeatedly, and from it he deduced that from four to eight ounces, rarely ten, and most commonly about six, of the menstrual fluid, are lost at each period.

When we consider the great difficulty in ascertaining accurately the amount of menstrual fluid at a given period, and the great *show* which a comparatively small quantity of blood or menstrual fluid makes upon white, or light-colored clothing, it is not at all surprising that observers should have varied so much in regard to the true amount.

Hippocrates believed that the Greek women lost twenty pounds of blood at each menstrual period.

Galen estimated the quantity at eighteen ounces.

Haller computed it at six, eight, or twelve ounces for the German women.

According to Smellie it amounts to four ounces.

Astruc says that in England it varies from eight to ten ounces.

Magendie thinks it is often very great among the French women, and may amount to several pounds.

It need hardly be said that the quantity of menstrual discharge often varies greatly in the same individual according to the condition of health, general habits, and a variety of circumstances too numerous to mention. It may be so slight as to be scarcely perceivable, or, on the other hand, it may be so very profuse as to amount to several pounds.

I have no doubt but that the amount of this discharge varies a good deal with the same person at different times, and that, even, when the health is good. At all events, I

advise you to take no trouble in reference to it, provided you can manage to keep clear of pain and other derangement of the general health. Keep up a good degree of strength, observing, at the same time, all good hygienic rules, and you have nothing to fear in regard to the quantity of blood you may lose. In other words, *take good care of the system, and the system will take good care of itself.*

In the next, I shall speak of an important matter connected with this subject. I refer to what is termed the *change of life*, or the period at which the menstrual function ceases. I need not add that this is a matter of importance to each and all of you, for I am persuaded that you already regard it as such.

LETTER IV.

OF MENSTRUATION.

Cessation of the Menses—Turn of Life—Management at this Period.

In every department of nature we see the most unquestionable evidences of design.

Who but an Almighty Hand could have created a being so complex, and a body so admirably adapted in every respect to his wants, as that of man? Every part of this great piece of God's handiwork is most accurately fitted to its place, and every function is performed for some important end.

Menstruation and child-bearing are, as we have seen, intimately connected with each other. Suppose a woman could bear children at any period of her life she might choose, what a premature offspring would that be which she would bring forth in childhood, and what a feeble, decrepid one in old age.

But it is not so. Nature has set up bounds which all the art and ingenuity of the whole combined world cannot pass.

It was the benevolence of the Creator that formed her body in this way; for if it had been left to the choice of us poor erring mortals, women would bear children at those times when it would be very improper to do so. And this benevolence extends equally to both mother and child.

Menstruation commences, as we have seen, usually at the age of from fourteen to fifteen years.

AGE AT WHICH THE MENSES CEASE.

The age at which the menstrual function ceases is somewhat various. The average has been regarded in this country as being at about forty-four or forty-five years of age. It is, at least, so with the community at large. In seventy-seven cases quoted by Dr. Maunsel, of Dublin, the period was as follows:

1	at the age of	35	years.	26	at the age of	50	years.
4	"	40	"	2	"	51	"
1	"	42	"	7	"	52	"
1	"	43	"	2	"	53	"
8	"	44	"	2	"	54	"
4	"	45	"	1	"	57	"
3	"	47	"	2	"	60	"
10	"	48	"	1	"	70	"
7	"	49	"				

Dr. Guy gives a table showing the ages at which 443 persons ceased menstruating, 337 having been collected and communicated to him by Dr. James Reed, and 106 by himself. The table is as follows:

1	at the age of	34	years.	14	at the age of	44	years.
3	"	35	"	35	"	45	"
3	"	36	"	21	"	46	"
4	"	37	"	30	"	47	"
7	"	38	"	49	"	48	"
11	"	39	"	30	"	49	"
29	"	40	"	47	"	50	"
13	"	41	"	10	"	51	"
18	"	42	"	17	"	52	"
4	"	43	"	11	"	53	"

13	at the age of	54	years.	5	at the age of	62	years.
7	"	55	"	6	"	63	"
7	"	56	"	7	"	64	"
8	"	57	"	2	"	65	"
7	"	58	"	3	"	66	"
0	"	59	"	2	"	67	"
14	"	60	"	1	"	68	"
4	"	61	"	5	"	69	"

M. Brierre de Boismont, a French author, remarks: "It has been said, in a general way, that the cessation of the menstrua takes place about the forty-fifth year in this country—a little sooner or a little later. The fact is true; but we believe that a better appreciation would be made by presenting a table indicating the different periods of the critical age." This author collected 181 cases of women, indicating the age at which they had ceased to menstruate, and here are the results:

At 21	2	At 37	4	At 48	8
24	1	38	7	49	7
26	0	39	1	50	12
27	1	40	18	51	4
28	1	41	10	52	8
29	1	42	7	53	2
30	8	43	4	54	5
32	2	44	13	55	2
34	4	45	13	56	2
35	6	46	9	57	2
36	7	47	13	60	1

The time at which menstruation ceases in Great Britain, must be doubtless very nearly or quite the same as in this country. In the above table it will be perceived that twenty-six females had menstruation until fifty, and only three to forty-four, and four to forty-five years of age. According to this, the average is considerably above forty-

five years in Great Britain; and it is probably about the same thing with us in the United States.

EXTENT OF THE FRUITFUL PERIOD.

The cessation of the menses, as I have remarked, is generally the limit of the period of child-bearing; but this rule, like all others, has its exceptions.

Bartholomew Mosse, according to Dr. Guy, mentions four cases of women pregnant in their fifty-first year, and Dr. Labatt, of Dublin, one; Knebel and Lamatte each one in the fifty-second year; Bartholomew Mosse and Knebel each one in the fifty-fourth year; a case of pregnancy at the same age (that of Mrs. Ashley) is also related in the Edinburgh Annual Register for 1816, in the French accusation, in which the succession to an estate was disputed on the ground of the mother being fifty-eight years old when the child was born, and the decision was given in favor of the fact.

Pliny, Valescus de Tarenta, and Marra, of Venice, record cases of pregnancy at sixty.

Capuron, a French author, states that a woman of sixty-three was generally believed in Paris to have given birth to a daughter.

Dr. Beck, of Albany, quotes a case from the Boston Medical and Surgical Journal, of a woman at White Hall, New York, becoming a mother at sixty-four.

A writer in the Edinburgh Medical and Surgical Journal, Mr. Robertson, states that out of 10,000 pregnant females registered at the Manchester Lying-in Hospital, 436 were upward of forty-six years of age. Of these there were—

397	from	40 to 46		9	in their	50th	year
13	in their	47th	year	1	"	52d	"
8	"	48th	"	1	"	53d	"
6	"	49th	"	1	"	54th	"

In some rare instances, also, conception has been known to take place prior to menstruation. Cases of premature fruitfulness are related by high authorities. Montgomery delivered a female of twins before the completion of her fifteenth year; La Motte and Sir E. Horne give instances of pregnancy in the thirteenth year; the last-named author another in the twelfth; and Bruce, in Abyssinia, and Demboss, in Bengal, met with mothers of eleven years. These facts I take from Dr. Guy.

I am next to speak of the cessation of the menstrual function, the turn, or change of life, as it is called. And I will here observe, that this period is as natural to the system of the female as puberty, or any other. But notwithstanding it is so, it is important to be remembered that all great changes or evolutions of the body render it probably, on the whole, more liable to take on diseased action than it is at ordinary times.

IS THIS PERIOD A DANGEROUS ONE?

From a long-prevailing idea that the cessation of the menstrual function is attended necessarily with a greater or less degree of danger to the general health, it has been called the *critical* period.

Doubtless, the health of some persons does at this time become worse; but, on the other hand, there are those who improve, and become in every respect stronger at the cessation of the menstrual function.

The learned Dr. Dewees, of Philadelphia, whose experience in the treatment of the diseases of women was perhaps as great as that of any other man, went so far even as to say, "The vulgar error that women at this period of life are always in danger, is replete with danger to the suffering sex;" and he continues: "I feel it a duty to declare that they are not necessarily more obnoxious to disease at this than at any other period of their existence."

According to observations made on the bills of mortality in France, by M. Benoiston de Chateaunauf, as quoted by Dr. Dewees, it appears that fewer women die between the ages of forty and fifty than men, or, indeed, at any other period of their lives after puberty; and further, that this change is effected without much disturbance; that they live not only longer than men, but are more free from morbid inconveniences. These facts are well worthy of notice.

In some cases, the menstrual function becomes more copious about the time at which it is to cease, and amounts almost, or quite, to an hemorrhage.

Sometimes it ceases, and then returns again; and thus an irregularity is caused. At length a final cessation occurs. In the place of menstrual fluid, a sort of mucous discharge takes place at times; the individual experiences lassitude and depression of spirits, nervous complaints set in, and, in some cases, serious diseases come on. But, poorly as the rules of health are by the many observed, the picture is often reversed—the woman's health becomes re-established, and firmer and better than before. She appears often more plump and ruddy after the change of life has taken place, and does, in fact, seem to grow younger for a time.

THE CHANGE OF LIFE.

Fanciful writers have sometimes indulged in poetic strains, depicting the changes of this season, as being very unfavorable to the personal attraction of woman. It is said, "that the bosom and cheeks become flaccid, the skin is wrinkled and appears to be too large, and loses its delicateness; the eyes sink in their orbits; the carnation of the cheeks is supplanted by a yellow tint; that empurpled flush which once, amid smiles, sat on her rosy lips, is chased away by a bluish or leaden hue. Every circumstance proclaims that the season of the pleasures is past, and that she can no longer rely on the attractions peculiar to her sex."

This delineation is by far more fanciful than true; and it oftener happens that, in consequence of the pernicious habits of civic and civilized life, changes as great, and often greater than these, occur at a much earlier date than this critical period, so called. Were the laws of life and health reasonably observed, there could no sudden or considerable change take place at *any* one time in life. As middle age merges into the more advanced, so, gradually and imperceptibly, comes on the riper and more mature state, before which woman does not arrive at the full time of her dignity, and the full period of the magnitude of her moral power.

But it must be admitted that there are in some cases reasons why the time of cessation of the menstrual function should be called the "critical period," or the "turn of life." Thus, with the beginning of suppression, or cessation, there may occur swelling of the abdomen, nausea, sickness, and loathing of food, as in pregnancy.

The imagination, too, may have something to do with this matter, for it is doubtless true, that some women "have such a dislike to age, that they would rather persuade themselves that they are with child, than suppose they are feeling any of the consequences of growing old."

I ought here to mention, that in those cases where pregnancy does not exist, the abdomen is softer and more equally enlarged, and swells more speedily after the obstruction than it does from real pregnancy.

Some persons are, at this period, so imaginative, as even to believe that they actually experience motions of the child, whereas there is only wind or flatulency in the bowels, which, by rumbling, or shifting from place to place, causes a sensation analogous to that of the motions of a real child. Some persons have even gone so far in this matter as to believe that they had passed through the entire period of pregnancy, and have called physicians and attendants, believing that labor had actually began. And some physicians, even, have remained many hours with these patients, when at last it has been discovered, to the great mortification of all concerned, that one important feature was yet wanting, in order for labor to take place, namely, the presence in the mother's womb of an actual child.

This change of life, I remarked, is a natural occurrence to every woman. It is as natural for menstruation to cease as it is for it to begin. Were the habits of society such as they should be, health, and health only, would be the natural result in all these changes; but such is not always the case. Some are barren and unhealthy, and have not vital stamina enough for them ever to gain truly firm and enduring health. Others, too, and probably a

far greater number, have their health destroyed, either by the ignorance of their parents or themselves, or of both combined. In such cases, some of the following symptoms may be noticed. If any organic disease is already present, with many it appears to be aggravated or increased. This is especially true in diseases of the womb and the breasts. It seems, indeed, that cancer of these organs is more apt to become developed about this time. Symptoms of dyspepsia are apt to be aggravated. Some become more corpulent, and as corpulency is a state of disease, more or less general debility, and inaptitude for walking and physical exertion of whatever kind, is experienced. There appears also, at this time, to be with many a greater tendency to inflammatory disease, diarrhea, dysentery, cholera morbus, or, on the other hand, a constipated state of the bowels; or the constipation may alternate, with one or more of the former complaints.

But, as I have already remarked, there are other cases in which the health becomes, in every respect, more firmly established and better after menstruation has ceased, than it was before.

MANAGEMENT AT THE CHANGE OF LIFE.

The explanation I have already given will indicate to you the nature of the general management which should be employed at the period of the cessation of the menstrual function.

I have said it should be regarded as a natural change in the system. The best local and general treatment that can be adopted, therefore, will be that which is calculated to fortify and invigorate the general health. Every

This book is the p

thing in diet, exercise, bathing, the daily occupation, and the moral and mental habits of the individual, should be, as far as possible, regulated according to physiological principles, and the laws of health.

Especially let not fear excite in you any unnecessary alarm respecting this period. Trust nature, and do by her properly, and she will do safely, faithfully, and efficiently her own work.

Those methods of dosing and drugging the system which have by many been practiced on such occasions, are, as a general fact, pernicious, doing a great deal of harm. Those especially who take powerful, and so-called expulsive medicines, with the view of forcing nature to continue the menstrual discharge, render themselves liable to serious injury. It is easy thus, by, as it were, a single misstep, to seal the inevitable doom of life-long ill health.

Doctor Dewees, in speaking of the great advantages of a well-regulated regimen in securing the woman against injuries which may arise from the irregularities of the menstrual discharge at this period of life, judiciously observes, "that a well-ordered course of exercise in the open air in well-selected weather, and great simplicity of diet, is of the utmost importance to the female, and should never be neglected, if it be possible to indulge in them."

By these means, the nervous, muscular, vascular, and lymphatic systems are all preserved more certainly in equilibrium with each other, since they are the best calculated to insure a reciprocation of their respective offices, and, consequently, to maintain that condition of the system termed health. Hence the justness of the remark, that the women who live in the country, and exercise freely in the open air; who have fulfilled their duties

scrupulously as mothers, by suckling their children agreeably to the views of nature; who do not goad their systems by over-stimulating food and drinks; who do not relax their bodies by too long indulgence in bed, have but little suffering at this period.

The advantages of a suitable degree of care in regard to exercise, diet, and all those habits that tend to the promotion of the general health, will likewise appear evident when we take into consideration the manner in which the system is sometimes found to suffer at this period.

During that part of the woman's life in which menstruation occurs, the constitution is under the necessity, so to say, of forming not only a sufficiency of blood for its own support, but a superfluous quantity for the purposes of menstruation. Now it must be the order of nature, that in a healthy and well-balanced constitution, enough blood only will be elaborated for the normal purposes of the economy; but if too great an amount is formed after the menses cease, there will be no outlet for it, and as a consequence, there will be, perhaps, fullness and congestion of the head, and other symptoms of plethora.

For this reason, physicians have often thought it necessary to abstract blood, and to use other depletive means. But I am led here to remark, how very much better, under such circumstances, it would be to employ fasting, or, at least, a proper degree of abstinence, and the other measures calculated to keep off too great fullness of the body. Nothing in the world is easier—provided a woman has sufficient control over herself, and perseverance—than to vary, to any desirable extent, the quantity of blood in the system; and all physicians agree that it is far better to regulate these matters by diet, and other hygienic

measures, than to have to resort to bleeding and ca thartics, provided that it can be done.

The practical deductions to be drawn from these remarks then, is, that if, at the change of life, the woman feels any of the symptoms of plethora and too great fullness in her system, she should adopt all good rules in regard to the improvement of the general health, and she should be especially guarded in reference to the amount and quality of food taken. In so far as she attends to all these matters, will she be more than doubly rewarded for her patience, her perseverance, and her self denial.

In conclusion, I remark, that if any one of you who is about arriving at the turn of life, feels that you are growing old, that you will be less attractive to those about you, and that you will enjoy less of the social pleasures of life after this change has taken place, there is yet a comfort for you, even in this world. You will now no longer be subject to those monthly troubles which, for these thirty years, have been your lot. All the annoyance, the irregularity, the tardiness, the suppression, and the pain—these all are now gone from you, no more to return. No doubt you may feel sad as the sighing wind reminds you in the autumn that we can be young but once. We all feel sad at times when we think how age is creeping upon us. But may I not say to you, there is yet that which can make us triumph over all of these things, yea, over death and the grave.

LETTER V.

OF MENSTRUATION.

Tardy and Suppressed Menstruation—Chlorosis—Sudden Check of the Menses.

One of the most important of all subjects connected with the health of females, is that of disordered menstruation.

You will find, as you read medical works on Females, the word *amenorrhœa*, which signifies a partial or total obstruction of the menses in women, from other causes than pregnancy and old age. You will find, also, the words *menorrhagia*, signifying an immoderate flow of this discharge, and *dysmenorrhœa*, meaning difficult or painful menstruation.

Before proceeding to speak of obstructed menstruation, I ought to make some remarks upon the too tardy appearance of this discharge.

As I have before observed, the catamenia usually appear at from the fourteenth to the fifteenth years of age. Now, when there is a failure on the part of nature to bring about this state of things, there is not unfrequently a great deal of anxiety experienced on the part of mothers and those most intimately concerned. If, likewise, the girl at this time is attacked with any particular ailment, it is almost sure to be attributed to this cause. Too often, under these circumstances, she is also subjected to various

modes of medical treatment, with the view of forcing nature into that sort of work which it is believed she ought to do, but will not. Now, the effect of such a course can be only harmful, as a general fact. To aid nature, it should be remembered that we must *increase* her powers, and not *diminish* them, as is almost necessarily the case if a course of drug-medication is practiced.

Please notice, then, that I wish to persuade you that this plan of drugging the system for tardy menstruation is a most unwise and unnatural one. Attend well to nature, and nature will take care of herself. Let me give you a few words from an honest, good man, Dr. Dewees, who years ago went to his long home. He says:

"Our exertions in favor of such patients, should tend to the invigoration of the system in general, and the development of the uterine system in particular. The first should be attempted—First: By the establishment of a regular course of exercise; such as riding on horseback, when practicable; walking in proper weather; skipping the rope within doors, when the weather will not permit exercise abroad; dancing moderately, and with strict regard not to become overheated, and cooling too suddenly. Secondly: By proper attention to dress; wearing flannel next the skin in cold weather, and properly protecting the feet and legs against cold; carefully avoiding damp and wet places, and partial streams of cold air, especially when warm. Thirdly: By a diet of easily-digested substances, both of the vegetable and animal kind; avoiding all stimulating drinks, such as wine, spirits, or beer, etc., under the specious pretext of their being strengthening."

I give you these words, not that I would altogether agree with every idea advanced, but because of the general

worth and correctness of the remarks, and the high authority from which they come. I do not believe it best for any one to wear flannel next to the skin, but I *do* believe in guarding the body sufficiently against cold, a thing which young ladies too often neglect. Dancing, too, as a general rule, cannot be regulated in the way it should be; and as for animal food, it is not necessary, to say the least.

I do not wish to appear to be fault-finding with your sex; but I must say, in all frankness, that some have taken an unreasonable course in regard to bringing on the courses, when they are tardy. The following case happened to a physician of eminence: The girl was a most amiable and interesting creature, for whom he was requested to prescribe for the expected menses, but who had not one mark which would justify an interference, and especially as she was in perfectly good health. She was fifteen, it is true; and this was all that could be urged by the mother in favor of an attempt to "bring down her courses." He relied too much upon the good sense of her anxious parent, and freely explained himself to her. She left him apparently satisfied with his reasoning, and he heard nothing of the poor child for six months; but at the end of this time he was suddenly summoned to attend her, as she was said to be alarmingly ill.

When he saw her, she was throwing up blood in considerable quantities from the lungs; she died a few days after from the excess of this discharge. The distracted mother told him, that though she appeared satisfied with what he had said when she left him, she was convinced he was wrong, and that her daughter's health required the immediate establishment of the menstrual evacuation. With this view, she determined upon the trial of a medi-

cine of much celebrity in similar cases, vended by a quack. She procured it, and gave it according to direction; in a few days her daughter became feverish, lost her appetite, and frequently vomited; her strength failed, and after a short time she was confined to her bed. She called upon the "doctor," and made known to him the condition of her daughter; he encouraged her to persevere, and told her that the fever, etc., was an effort nature was making for the end proposed. She persevered, fatally persevered, for in a few days she lost her lovely and only daughter. The medicine given in this case proved, on examination, to be the oil of savin (*juniperas sabina*), a most active poison, and one which, in the smallest doses, has been known to produce disastrous results.

EFFECTS OF WATER-TREATMENT.

There is one remarkable fact concerning the effects of water-treatment, as affecting menstruation, which should here be spoken of. Where a vigorous course of hydropathy is practiced for chronic disease, the menstrual function, in some cases, ceases for months, and even a whole year or more. I had first to learn this fact for myself, no other practitioner ever having promulgated the doctrine, so far as I know. And it is a remarkable fact, that in such cases no injury arises from the circumstance; but the individual's health grows, month by month, in all respects better. No inconvenience is experienced from the suppression, nor need the slightest alarm be felt. The probable reason why menstruation thus ceases is, that a vigorous action of the skin is caused by the water process; elimination, or the throwing off of the waste, morbid, and

impure matters, is made to go on so rapidly and vigorously, that there is no need of the purification of menstruation at the time. This doctrine, however, is conjecture and mere speculation, and one that does not appear to be susceptible of positive proof. That the occurrence does takes place, and that women have, at the same time, been remarkably benefited in health; cured, as we may say, of long-standing and most obstinate chronic diseases, we know to be a fact.

But whenever retention of the menses occurs, and is not caused by pregnancy, or by the age of the individual, at which the function ceases naturally, or by a course of water-treatment, we are to suspect some derangement of the general health. This is a natural function, and if we find it ceasing when it ought to go on, we may safely conclude, that the efforts of nature are by some means thwarted; otherwise she would do her work.

CHLOROSIS.

Retention of the menses is very often attended with what is technically termed *chlorosis.*

The word chlorosis signifies a greenish, or greenish-yellow hue of the skin, and might, therefore, be applied to certain affections belonging to both sexes; but the term is "generally confined to that modification of amenorrhea, which is attended by a dingy-pale, or greenish color of the skin." Chlorosis also goes often under the name of *green sickness.*

In this disease there is "heaviness, listlessness of motion, on the least exercise palpitations of the heart, pains in the loins, back, and hips, flatulency and acidity in the stomach

and bowels, a preternatural appetite for chalk, lime, and various other absorbents, together with many dyspeptic symptoms." In the progress of the disease the face and lips become pale, and after a time assume a more yellow hue; there is great general debility, flaccidity of the muscles, and not unfrequently, swelling of the feet and lower limbs; there is, in short, a great variety of symptoms, varying more or less, endlessly, as we may say, in different cases, and such as denote a very depraved state of the constitution generally.

This disease is sometimes cured spontaneously. The simple force of nature, acting also, perhaps, in consequence of favorable circumstances as to air, exercise, diet, clothing, occupation, etc., is often sufficient to effect a cure. Menstruation is brought on, and thus the individual becomes well; but in other cases the affection is of a very obstinate nature, and leads to disease of some important organ, as the womb, bowels, lungs, etc., and ends at last in death.

Chlorosis has been sometimes mistaken for tubercular consumption. When the patient has been cured, it has been said she was cured of that disease. Thus it is that more persons are said to be cured of this dreadful malady than actually have been. Chlorosis, as a general fact, is by far oftener curable than consumption is. It is, in fact, generally curable if taken in season, which, alas! cannot be said of that most formidable disease, consumption of the pulmonary organs.

Causes.—The *causes* of chlorosis are as numerous as the causes of depraved health generally. Any thing which tends to lower the tone of the system generally, during the period at which chlorosis ordinarily comes on, may

act as a cause, either directly or indirectly, of the disease.

I will here give you a case which may serve to throw some light on the subject.

A physician was called to visit a young lady of the city of New York, of a wealthy family, in which, the mother being present, something like the following conversation occurred:

DOCTOR.—Well, Miss, how are you to-day?

PATIENT.—Not very well, I am sorry to say.

D.—Do you attend school at present?

P.—Yes; I am at Mrs. ——'s seminary, in —— street.

D.—How long have you been there?

P.—Four years, including now and then a vacation of a few weeks.

D.—What have been your studies?

P.—Composition, Rhetoric, Mathematics, Philosophy, Chemistry, Botany, French, Spanish, Music, and Drawing.

D.—Do you like your studies?

P.—Yes; some of them very much.

D.—How do you like the study of English composition?

P.—I can hardly say; we have to do every thing in French; address our teacher in French when we go to school in the morning; speak French in our exercises; in short, it is nothing but French all day.

D.—On the whole, you say you like your studies?

P.—Yes, when I am well; but latterly I have been so ill and low-spirited I could not enjoy any thing. I like study when I am able to perform it—like it very much. I used to succeed well; but latterly I am discouraged, and do not accomplish any thing at all.

D.—Well, now let us know all about your health, and see if we can find out what the matter is, and what it is proper to do. Here you have a fine, airy residence, an abundance of the best things to eat and drink, and to wear; good baths, good walks, and every thing about you to make you happy and comfortable.

MOTHER.—She has never been regular, doctor, in her whole life.

D.—Does she take her regular baths?

M.—No; she won't bathe hardly ever, and as for taking an injection, she would die first.

P.—No, mother; I do bathe two or three times a week; but then it chills me and makes me tremble so, I don't get over it all day.

D.—But don't chill yourself, use the water milder; but take your bath every morning, or at least some time during the day. You cannot be as clean as you should be in a dusty city like this, unless you wash the body every day.

M.—The rest of us take a cold bath every morning, and it does us a great deal of good; we would not do without it on any account.

D.—How much does your daughter walk every day?

P.—Walk! why! mother won't let me walk. I only go to school and come back, that's all.

D.—You only go to school and back. Let's see how far that is; about a quarter of a mile there, and a quarter of a mile back. Then you walk a half mile each day.

M.—She sometimes goes up and down stairs dusting off the furniture in the house.

D.—That is all very good, so far as it goes. Does she ever make bread?

M.—No; we get the bread at the baker's.

D.—And rather poor stuff at that. Does she ever wash?

M.—Well, no; the servants attend to that. She has too many studies you know, doctor, for that, and then—

D.—How is the patient's appetite?

P.—Not very good; sometimes I eat a great deal too much, but the most of the time I relish nothing. I am often wanting what I cannot get; and food always distresses me, gives me acid stomach and heartburn, and so on.

M.—Yes; she likes chalk, charcoal, slate pencils, vinegar, and all such things. She has always an appetite for these.

D.—This is a morbid, diseased appetite. Do not blame her, she cannot help that; if you or I had just such an appetite, and felt in all respects as she does, we would very likely gratify it to as great an extent. How does the patient sleep?

M.—Not very well; the bed is never right; sometimes we put on a feather bed, and then she gets fidgety and says she cannot sleep; then again we put the hair mattress over the feather bed; but this is either hard, rough, or uneven —there is always some kink in her head about the bed; it's never right.

D.—Does she have her window open?

M.—No; she's afraid of taking cold.

D.—What kind of pillow does she sleep on?

M.—Feather pillow, of course.

D.—*Of course*—a great many people are getting to sleep on hair pillows—and some on harder ones even, such as palm leaf, corn husks, straw, etc.; and some young ladies won't have any pillow at all; it makes them crook-

ed not to lie straight. For my own part, I like to have one pillow, stuffed with hair, moss, corn husks, or straw—something that is clean, without smell, and cool. One pillow, and one only, that is just thick enough, so that when I lie upon the side, as I think persons who can ought, it is just comfortable. There is a great deal of truth in the old maxim, "keep the feet warm and the head cool!"

M.—I had not thought of that; I suppose the head does keep warm enough of itself.

P.—O yes; you know, mother, my head is always burning hot, and aches most dreadfully too.

D.—At what time of day does it ache most?

P.—It aches all the time; it's never right.

D.—How do you feel in the morning when you get up?

P.—Very badly; I never sleep well; I feel heavy and weak, and my head aches.

D.—How do you feel when you walk out in the open air?

P.—Well, I can hardly say; in fact I don't feel as if I *could* walk. It is as much as I can do to get up and eat breakfast and fix off for school.

D.—Did you ever go the country in the summer?

P.—O yes, to Massachusetts.

D.—How did you feel there? Could you walk?

P.—O yes; we had walking parties, rides, visitings, and a great many things to take the attention; and I, in fact, either forgot all my ailments, or else had none, I don't know which. I have been to the country a number of times, and whenever I go all my headache leaves me, my appetite becomes good, and I am soon able to bear as much exercise as any one need.

D.—Do you have any headache?

P.—Strange as it may seem, not the least.

D.—Do you study your books much in the country?

P.—No, very little; we go for relaxation and amusement; we read, perhaps, a little, but do not undertake hard study.

D.—How much do you walk or ride in the day?

P.—Well, I can't tell; we go sometimes in one direction and sometimes in another. We even walk to neighboring villages; we go some days, I should think, in all ten miles on foot; and I think, indeed, sometimes twice that distance.

D.—Does this give you fatigue?

P.—It does at first, sometimes; but somehow my mind becomes so interested with the country, I forget all my aches and pains; you know I have always lived in the city, and the country seems to me a new life; I seem to feel as happy as the birds.

D.—How do you sleep at night?

P.—It's a rude place you know, and it is fashionable in the summer there to sleep on straw beds. But it is no matter; we get so tired as to be very glad to sleep any where. We could sleep on the floor, or sitting up in a chair if necessary; when we get so tired sleep we must.

D.—How long do you stay in the country?

P.—Six weeks, and sometimes more.

D.—What kind of food do you eat?

P.—Plain food, such as the country people have. I generally take bread, vegetables, berries, and milk. They have hams, pork, all sorts of meat, and things of that kind; but you know father does not wish me to eat meat; nor have I any particular relish for it. I sometimes eat a little fresh butter along with my brown bread; I suppose

I would be just as well off without even that; I enjoy the bread, berries, and milk very much.

D.—Does food agree with you in the country?

P.—Generally very well.

D.—How do you feel after you get back to the city?

P.—Very well for a time.

M.—I guess you would think so, doctor. She acts like a perfect romp; there is no keeping her any where.

D.—It is natural for healthy girls to romp, as you call it. What would a boy be worth, if he were not allowed plenty of exercise? Girls must have their plays and sports, otherwise they will suffer in health. Thus you perceive when your daughter goes to the country, takes plenty of exercise, eats plain food, avoids excess in study, and lives mostly in the open air, she very soon becomes well. Some, perhaps, might tell you that all this is merely the result of *a change;* but, I ask, if it is merely a change that makes her so much better in the country, why does she not grow still better even when she changes back to the city? The truth is, it is not so much a change, as it is the healthful influence of air, exercise, diet, and freedom from excessive study, which work so great a benefit to her health. You perceive, also, it is not medicine your daughter needs. What has your family physician said about this?

M.—Well, be sure, Dr. K—— used to give a great deal of medicine, but lately he has changed; he says, in such cases it is not of much use. All he ordered was some iron pills, as he called them; and he did not seem to make much reckoning of these, either.

D.—I suppose not. He is an intelligent man—a man of great experience; and he knows well that all well-inform-

ed physicians have given up the idea of *emmenogogues*, or medicines, which have a specific effect to bring on the monthly periods. The pills of iron are supposed to be tonic; that is, they invigorate the system somewhat for the time being; but these, even, soon wear out. You have to take more and more of them, until at last they lose their effect altogether; and worse than that, they in the end become debilitating. That is the way with all medicines, not excepting even tonics. Physicians are in the habit of thinking that they must order something from the apothecary's, even if it is nothing more than bread pills, colored a little, to make them look *like* medicine. They think they must do something, or else it would not be fair to charge for their visit. Medical men, you know, must live by their profession; and people have not been in the habit of thinking they must pay, unless the doctor *does* something. For my part, I think that physician deserves the most pay who does the least; that is, who will teach people to cure themselves, and to keep well without medicine.

Thus, you perceive, I advise your daughter to take no medicine. If there were any medicine in the wide world which I thought would do her the least permanent good, I would advise it; but I do not believe there is any such in her case. Correct her habits of life throughout, and then, in due time, nature will of herself make all right. I advise, then, a course something like the following: take your daughter at once from school, no matter if she loses a year from her books. She can practice music somewhat, the best of all her studies, except, perhaps, reading and writing her mother tongue; but I would not have her practice music too much; a half hour or an hour at a

time, perseveringly employed, and this two or three times a day, would be sufficient. And if you choose to take up with my plain advice, let her try her hand at the bread-trough and wash-tub. She is getting to be quite along in her teens. Now let her imagine that she were to become the wife of some honest, intelligent countryman—a physician, merchant, or perhaps, best of all, a farmer—no matter what, so that he be a good, honest, industrious, and worthy young man. Suppose, now, that she really loved him, as I am sure she would, although he is not rich, but in moderate circumstances; now, I say, let her imagine that she is going to be a *housewife*, as well as wife; let her suppose that she is to make his bread, cook his food, clean his house, and do his washing, at least so far as her health would permit, never further; at least we will suppose that she is to understand all of these matters, and that she will habitually oversee them, and take some part therein—we cannot suppose that a house-servant, however good and faithful, will feel so deep an interest in so important a matter as making the family bread, as the wife would. As the wife loves the husband better than all the world besides, so she is the one who is naturally expected to take a deeper interest in all that pertains to his happiness and comfort, and general good. Now, I say, let your daughter practice all these things; for every good and intelligent young lady looks forward—and that with solicitude—to the day when she shall become a wife.

Let her imagine, then, if you please, that she is to be married, and that the husband of her choice is actually poor; and you know every wise and good parent will not ask their daughters, in forming connections of this kind, "Is he rich?" No; but rather, "Is he honest?"—"Is

he respectable?"—"Do you love him?" That is all. Leave other matters all to herself. And then, another thing, riches, as we are told, often take wings, and fly away; so that it is better for every one to be independent, and know how to do for themselves. Let my daughter know how to make a living by teaching music, or painting, or drawing, or any thing that is useful and proper; but, first of all, let her know how to make her own clothes, her own bread, and do her own work. Teach these things first to your daughter, and then as much more of science and the fine arts as you can—the more the better, only do not let it interfere with health.

And now, if, in connection with what I have said, I were to advise your daughter a course of water-treatment, physiological treatment, or hygienic treatment, or whatever you please to call it; or what I consider actually best for her case, it would be something like the following: Let her take a packing-sheet, for twenty minutes, early on rising; then a good bath; then a walk, but not too much at first. Let her repeat the same process in the afternoon. Let her walk a great deal in the open air, that she may have the influence of air, the exercise, the light, and the mental impressions caused by a change of objects combined. Thus may she gradually regain her health. And let her, in connection with this, observe all good rules of which I have spoken.

There can be no doubt that retention and suppression of the menses often occur from precociousness—from precocious education and precocious habits. Parents are, I fear, too often in the habit of wishing that their daughters should become young women early. The daughters are

often, no doubt, put forward a great deal too much. I have known numbers of instances where little girls, five, six, or seven years of age, have been sent to dancing schools; and are we to suppose that these early imitations of older persons have no injurious effects? True, children are fond of jumping, skipping, and dancing, in their own way; but this being sent regularly to a dancing master, and being allowed to dance with persons much older than themselves, and of the opposite sex, too, will no doubt have an effect in rendering them precocious. I have known such young girls often become very feeble in general health; and when severe disease attacks them they are found much less able to resist it than those who have not been reared in this doll-baby, fashionable style.

I do not deny that young girls should be allowed to indulge freely in their natural and healthful sports. The restraints of womanhood should not be put too soon or too strongly upon them; nor should their minds be overtaxed during the tender age. This is far too common a practice nowadays everywhere. If people but have the means, they seem to vie with each other in endeavoring to make their children precocious, so far as learning is concerned, while the physical training, which, before ten years of age, is far the most important, is almost wholly neglected. Chlorosis and other forms of amenorrhea are, beyond doubt, caused by these unnatural habits in which children are too often reared at the present day.

A sudden suppression of the menses is often caused by taking cold, as we say. A young woman is in the habit of being much confined within doors, and perhaps in poorly-ventilated and overheated rooms; she dresses too tightly, sleeps perhaps on a feather bed and feather pil-

low; she drinks freely of tea and coffee, as people generally do; eats superfine bread, gravies, flesh meat, and other forms of stimulating food, and thus she becomes nervous, irritable, variable in her feelings, and highly susceptible to changes of temperature. Now, a young lady living in this manner is invited to an evening party. We will suppose it is in the fall or winter time. In dressing herself for the entertainment, she puts on her thinnest clothing, and in place of her firmer stockings and thick shoes, she puts on very thin and light ones. The party is continued late in the night, for hours beyond the usual bedtime; the room becomes overheated, and in consequence of the numbers present, the air is rendered very foul. At length refreshments are handed around, such as cakes, tea and coffee, nuts, and the like articles, and of these she partakes freely; and among the other excitements, she perhaps, before going home, engages in the dance; she becomes overheated, overexcited, and perhaps starts for home in a perspiration. She is certainly very liable, under such circumstances, to take a cold, which, in many instances, if it does not result in any thing worse, causes a sudden suppression of the menses.

EFFECTS OF DRUG-TREATMENT.

And now, to follow out our imaginary case, how is this young lady to be treated? Do not people generally set at work in such cases with hot drinks, hot baths, and, in short, the heating means generally? And what is the result of such treatment? If it be at all persevered in, the individual is rendered more weak. Such treatment may occasionally succeed; but any and every means of

debilitating the system must necessarily render it more liable to a similar attack. But it is also to be observed that such treatment generally fails of its object, and thus, in the end, the patient is certain of being made worse for it.

How came this delusion? How does it happen that people are so much afraid of the cooling and tonic means? It is from a wrong understanding of the nature of the case. In the first place, a cold was taken. This is literally true; cold made a more powerful impression upon the system than it could bear at the time without harm. As a secondary effect, inflammation is the result. In all cases of acute, but sudden suppression of the menses, I conceive that there is more or less inflammation of the womb; and wherever there is inflammation, which always consists in increased heat, the natural discharge cannot go on. Now here, where there is a cold, as we say, which means heat and inflammation, should we apply hot things? Certainly not; but rather cold. And yet I would not use cold too much; never more than the individual can safely bear.

This, then, is the plain treatment for acute suppression of the menses: do all that may be in fortifying the general health of the individual.

If at any time there is shivering, or rigors, apply the rubbing wet-sheet, rubbing briskly over it, and then let the patient go and exercise in the open air. Let her bathe, at least daily, in water tepid, cool, or cold, accordingly as she can bear. A tepid-bath, that is, water from 70 to 80° Fahr., is always cooling in effect, it being much cooler than the blood, which, in its natural state, is 98° Fahr. She should also wear the wet girdle constantly, changing it at least four times in the twenty-four hours. She should walk out daily and often, but not too far at a time. She

should, in short, pursue just such a course as we would in any similar case of debility; and, if necessary, take a full course of water-treatment, such as is suited to the particular case.

I am sorry that some of my younger friends of your sex are in the habit of checking the menstrual discharge, for some particular object; but if they could know the great hazard they run in doing so, they would not, I hope, do it. Let me say a few words to them on this subject.

Frank mentions the case of a young lady who put her feet several times in cold water during the flow of her menses, because she expected her lover, which quickly arrested them. An inflammation of the womb followed, and she was brought dying into the hospital, at Vienna.

One of his relatives, of fine health and rare beauty, who, after dancing all night with her menses on her, left the ball-room in full perspiration; she would not wait for a carriage, but proceeded home, which was not far off. She was attacked with inflammation of the womb, and died on the fourth day.

Mr. Brown, a writer in the Edinburgh Medical and Surgical Journal, gives the case of a lady of about forty years of age. She had become very much heated by a long walk in hot weather. At the end of her walk, the menses appeared, but which were entirely suppressed by a drink of cold water. This was followed by headache, oppression, and amaurosis of the left eye. In about six months, Mr. Brown succeeded in restoring the menstrual discharge, at which time, also, her sight fortunately returned to her. The eyes are particularly liable to affections of this kind, arising from a sudden stoppage of the catamenial function; and some have been made blind for life

in this way. I hope, therefore, that those for whom I write, both young and old of your sex, will hereby learn to be very cautious in regard to checking the monthly discharge. You see how dangerous it is, and how easy, by carelessness or design, it is to cause it. But, beware!

Shall I again speak of the water-treatment? If you bathe habitually every day; if you are careful to avoid overheated rooms, and becoming too fatigued; if you exercise daily in the open air, and keep yourselves actively engaged in some useful employment, you will have little to fear from the evils of which I have been speaking. But, after reading what I have said, if any of you *will* persist in taking such a course as will tend to the suppression of the catamenia, or, what is worse, if any of you should *dare* to put a check to this discharge, when it interferes with your pleasure or convenience, the evil must be upon yourselves, and not upon me. But I hope for better things of you, and that no one will be guilty of designedly or wantonly doing that which can only end in harm.

LETTER VI.

OF MENSTRUATION.

Menorrhagia and Dysmenorrhea—Their Nature and Treatment.

In the present letter I propose giving you some thoughts concerning two other forms of disordered menstruation—I refer to *menorrhagia*—an immoderate flow of the menses, and *dysmenorrhea*, by which we understand painful or difficult menstruation. There are few subjects connected with health, which deserve more particular attention, or which are of greater interest to you, than these of which I am now to speak.

Menorrhagia, from two Greek words signifying the menses and to break out, implies, according to common acceptation, either an immoderate flow of the menses, or uterine hemorrhage, which is often a very different thing. It is generally characterized by pains in the loins, small of the back, and abdomen, similar to those of labor. There is always a preternatural flux of either blood or menstrual fluid from the vagina in what is termed menorrhagia.

Dr. Cullen reckoned six varieties of this disease.

1. Menorrhagia rubra, or bloody menorrhagia, from women neither with child nor in childbirth.

2. Menorrhagia alba, or white menorrhagia, which is, in other words, leucorrhea, fluor albus, or the whites.

3. Menorrhagia vitorium, arising from some local disease.

4. Menorrhagia lochialis, or lochial menorrhagia, from women after childbirth.

5. Menorrhagia abortus, or menorrhagia with abortion.

6. Menorrhagia nabothi, when there is a serous or watery discharge from the vagina in pregnant women.

I think it a better mode to treat of menorrhagia according to the original signification of the term, namely, an immoderate flow of the menses. I admit it must, from the nature of the case, be often difficult—indeed impossible—to determine whether a case belongs really to menorrhagia proper, or to hemorrhage from the womb. But the true indications of treatment would be the same in either case, so that a mistake in diagnosis would be of no manner of account in practice. I shall, then, speak of menorrhagia as a separate and distinct disease. I shall use the term simply as meaning an immoderate flow of the menses. Leucorrhea, hemorrhages, abortions, and the lochial discharge, will be spoken of separately. But I admit it must, after all, be a question, whether in all cases of immoderate flow of the menses, there is not actually hemorrhage. It is held by some, that the fluid, or discharge, in menstruation, is never capable of forming clots; in short, that it is in no sense common blood. But we know that in a great number of cases clots are formed. If it is, therefore, true, as some assert, that the menstrual fluid proper never coagulates, then, in all these cases to which I have referred, there must be hemorrhage. I am of the opinion, that the menstrual fluid is capable, in some cases at least, of coagulating like common blood. For all practical purposes then, it will be sufficient to understand by the term menorrhagia, all immoderate menstruation that does not actually amount to a plain and palpable hemorrhage.

Who are the persons that are most subject to menorrhagia? "Women who live indolently and indulge in stimulating articles; who use little or no exercise; who keep late hours; who dance inordinately; who are intemperate; who have borne many children; who have been subject to febrile affections; who have much leucorrhea; who are too prodigal of the joys of wedlock; who are advancing toward the non-menstrual period; who yield too readily to passions or emotions of the mind, are those," says a distinguished author, "most subject to menorrhagia; to which may also be added, those women whose physical labors are too great, as well as those who have too little labor, are also subject to this disease."

Menorrhagia, like amenorrhea, indicates a deteriorated state of the general health. A really healthy person can never have the disease, except, possibly, under some peculiar circumstance, for a single time. Real healthy persons, who have no natural impediments, always menstruate regularly.

Treatment.—The general indications of treatment will be inferred from the character of the disease. Do every thing that may be to fortify and invigorate the general health. Every thing that tends to this important object, acts indirectly to effect a cure. This is the only rational mode.

Daily and habitual bathing in water, tepid, cool, or cold, according to the patient's strength, is a means of wonderful advantage in this disease. The fibers of the system are too lax, so to say; the vessels open too readily, and thus an unnatural discharge takes place. Imagine that you have walked a long way in a hot day: you find the veins of the hands and feet swollen, heated, and en-

larged. The tonicity of their coats has become lessened. If a vein were opened under such circumstances, the flowing of blood would be much more free than ordinarily. Now if we wash these parts in which the veins are too much enlarged, we find that the water immediately strengthens them. The unnatural amount of blood is driven back, the vessels again assume their normal condition. Here we find an evidence of the tonic effects of cold water. Tepid water is also tonic, to a greater or less degree, because always cooling. It is on this tonic principle that water acts so favorably in excessive menstruation.

It is to be observed that in menorrhagia there is much less pain than in the opposite state, namely, deficient menstruation.

DYSMENORRHEA.

I next speak of *dysmenorrhea*, or painful, difficult, or laborious menstruation. This is not only a very common affection, but one of the most painful to which females are subject. Many a woman has spent almost her whole menstrual life with as much pain occurring at each menstrual period, as though labor itself had been passed through. What untold sufferings, alas! are women brought to endure in this disease. Can we for a moment suppose that it is in accordance with the designs of a benevolent Creator, that woman should thus suffer? I answer unhesitatingly, it cannot be. Neither can reason, analogy, or the facts of experience be brought to prove the contrary of my position.

The most prominent and distinctive feature of this disease is the pain. This is experienced mostly in the loins. There may also be pains in the uterus; pains, in short that

resemble, both in character and severity, those of actual labor. These become so severe and agonizing, in some cases, as to cause the patient to faint. This affection is one in which not only great suffering is experienced, but is also often one of great obstinacy.

Dysmenorrhea may, for the sake of convenience, be divided into three species:

1. The inflammatory; which occurs in persons of a full, plethoric, and sanguine temperament.

2. The neuralgic; which occurs in persons of a highly-excitable temperament, and of a delicate habit of body; and,

3. Where there is a mechanical difficulty to the passage of the menstrual fluid, as, for instance, a closed, or nearly-closed vagina, and a too small opening of the womb.

Those suffering from the first species of the disease are such as are generally too indolent in their habits, and partake too freely of rich and gross articles of food.

The second variety of the disease is often caused by the too free use of narcotics and stimulants, such as tea, coffee, opium, and, in some cases, tobacco; though, to woman's credit, it is to be said this last article is not much used by them.

The third species may arise from some congenital impediment, or such as existed from birth. In the treatment of this last, mechanical or surgical means may, therefore, not unfrequently be resorted to with benefit.

Females, whether married or single, appear to be equally subject to this disease. In some cases, marriage appears to cure it; in other cases, it would seem that it caused it.

A change of air, such as leaving a city to reside in the country; or perhaps on the contrary, in some cases where

persons remove from the country to the city, the affection ceases.

Effects of Pregnancy.—Pregnancy appears sometimes to break in upon the disease, and cure it; but it is far oftener true, that females who suffer from dysmenorrhea, are incapable of conceiving. Oftener, in this disease, there is a too scanty flow of the menstrual discharge. Sometimes, however, it commences with little or no discharge, but ends in a very copious gushing forth of the menses, which brings entire relief from the pain. "A membranous substance, or small coagulum, is discharged; if it be a membranous substance it will be found of unequal size, sometimes small, at other times large; and sometimes it resembles the cavity from which it has been expelled; at other times it will be broken into many fragments. After the expulsion of this substance, the woman enjoys ease, unless there be a fresh production, in which case it requires for its expulsion fresh contractile exertions of the uterus." Dr. Denman regarded the secretion of this membranous substance as a mark of barrenness, and says that he never knew a female conceive, in whom it was formed. This rule, doubtless, often holds true, but not always, as observation proves.

Causes.—The causes of this disease are plainly the same, or very similar, to those which operate greatly to deteriorate the general health. "It would perhaps be very difficult," says Dr. Dewees, "to assign all of its remote causes. The most common are the application of cold during the flow of the menses; taking cold after abortion; and in some instances it follows the beginning of marriage; but in other instances the causes are so hidden as not to be cognizable; the married and single are alike subject to it."

Treatment.—Immense mischief has been done in this

disease by the administration of powerful medicines. A disease so obstinate in its nature as often to call forth the greatest endeavors on the part of the physician to cure it, has been combated, in instances innumerable, by the most potent drugs. Nor are these poor suffering patients backward themselves to swallow any opiate, anodyne, or antispasmodic, however powerful and however harmful it might prove to the general system, if there is any prospect of obtaining present relief.

As this is one of the most painful affections to which human nature is subject, I will enter particularly into a consideration of the means to be employed to cure it. We may divide the treatment into two heads:

1. That which relates to the general health; and,

2. That which relates to the time in which pain is experienced.

As to the first of these considerations, all that I have said or can say in these letters respecting the means and modes of improving the general health and stamina of the system, should here be brought to mind. The second of these indications, however—that of relieving pain—I will endeavor to explain fully.

I must tell you that I have studied and practiced the healing art now a considerable number of years. I have endeavored to learn the truth in this important mission of healing the sick. I now, therefore, solemnly declare to you, that in the whole range of the medical art, so far as I have been able to learn it, I know of nothing that excites in my mind a more lively interest, or a more thankful feeling toward the Author of our being, than the adaptation of cold water as a means of relieving the pain and agony which often attend the menstrual period. There is,

if I am a judge in this matter, nothing in the whole range of the materia medica, no, nor in all drug-substances combined, that can at all compare with the power of this blessed element to assuage pain. But of this I shall speak more, presently.

As a remedy in painful menstruation, Dr. Good recommends "the advantages of traveling, change of air, and a new stimulus given to both the mind and body by novelty of scene, novelty of company, amusing and animating conversation, and exercise of various kinds." "With these," continues this author, "may also be combined, in the intervals of the menstrual season, and particularly before the discharge has appeared, the use of cold, and especially of sea-bathing."

Thus it appears that Dr. Good himself entertained the erroneous notion that cold bathing is a dangerous measure at the menstrual period. He observes, however, that "an unnecessary apprehension of catching cold by the employment of this powerful tonic has been entertained by many practitioners;" that with proper care he had never known it occasion this effect; and that it should only be relinquished when no reactive glow succeeds to the chill produced by immersion, and the system is hereby proved to be too debilitated for its use. But in the water-treatment, as you all know, we are not obliged to resort to cold immersion alone; the rubbing wet-sheet is a most excellent application in those cases where the reactive or calorific force is at a low ebb. We can also use tepid ablutions of various kinds with great advantage, under such circumstances—great, not only as regards the patient's feelings of comfort and strength, but as to cleanliness, which is also an important consideration.

As to the second indication of treatment in these cases, suppose the pain is already upon you. You ask, "What are we to do?" I answer, there are many things, among which are the following:

The *rubbing wet-sheet*, with a good deal of rubbing and faithfully applied—many times in the whole day if you find need—is one of the best applications.

The *wet girdle*, likewise, should be kept constantly about the body, and changed as often as the pain requires. Wet compresses about the thighs and below the knees, or about the calves of the legs, are also useful.

The *sitting-bath*, cold, and sometimes alternating with warm, is also to be employed. If, at the same time, some one rubs the back well with the wet hand, the relief will be more speedy. In very bad cases, when the pain amounts really to a great agony, sitting in a wash-tub, with a couple of pails of cold water in it, at the same time having two or more persons to aid in rubbing the whole surface, if properly persevered in, must sooner or later quell the pain. Possibly, in some cases, it might require an hour or more to effect the desired object. If the patient becomes too much fatigued to continue the half-bath a long time, she can recline in a folded wet-sheet to rest herself, and then afterward proceed again to the bath. Frictions with the wet hand upon the surface, generally have great effect in assuaging pain in these cases.

The *folded wet-sheet*, that is, a common double sheet of linen, although cotton answers tolerably well, folded once each way, half of it being wet, and applied about the trunk of the body from the arms downward, is a very soothing application in these cases. Applied in this way, two thicknesses of the sheet next to the surface are wet, and the

two outer thicknesses are dry. This is a very convenient application, and one great advantage in using a sheet in this way is, that we can open it in front of the body and rewet it, by sprinkling water upon it, without the patient being obliged to rise. If she is able to get up at the time of rewetting the sheet, it is better to do so; but if she is not, it can be done without. A patient may remain many hours in this folded sheet if there is need, a whole night, for example; but she should not allow herself to become too warm in it, as that would weaken the body. According to the season of the year, it should be rewet more or less often, and the patient should have more or less covering as she may feel a need.

The *clyster* is also a great help in subduing pain in the womb and back. The tepid, or lukewarm, as a general thing, answers best. We use, sometimes, gallons in succession, until the object is brought about.

The *foot-bath* is likewise a useful remedy. If the feet are cold, they should be put in warm water, the old-fashioned way; but if otherwise, cold answers the purpose best.

Now, it may occur to you, that this kind of treatment, which is so opposed to the old notions, is to be considered as a dangerous one. You know how afraid women are of cold under such circumstances, and how dangerous it is, in fact, to chill the body at certain times. But remember I am speaking of extreme cases of *pain*. Cold does not injure the body at such times; but, on the contrary, does a great amount of good. You know that if the discharge gets well started in these cases, the pain ceases. Now the cold, instead of checking the discharge, does actually help it to come. The pain, the undue heat in the uterus, the

inflammation, as it might almost be styled, is the cause of the discharge not appearing. The application of cold puts a stop to this pain and undue heat, and thus the discharge is helped to come forward.

You will, then, perceive that cold, under circumstances of fatigue and exhaustion, must have a very different effect from what it does when the body is in great pain. In the former case it is highly dangerous; in the latter, highly useful.

But good as cold water is to relieve pain, do not, I beseech you, neglect the means of restoring the general health under these circumstances. It is very foolish, as well as inconsistent, to allow yourselves to go on in habits which your own better judgment must tell you, can only tend to make you worse at the menstrual period. Do not think, that because you have so good a remedy as cold water always at hand, that you can do as you like in regard to self-indulgence.

LETTER VII.

SIGNS OF PREGNANCY.

Importance of the Subject—Difficulties of ascertaining Pregnancy in some Cases—Means by which it is to be Known.

THERE are some circumstances in which a knowledge of the signs of pregnancy is of very great importance. Dr. Rigby informs us that "there are numerous cases on record where a false diagnosis in women convicted of capital offenses, has led to the most lamentable results, and where dissection of the body after death has shown that she was pregnant."

Baudelocque, a French writer on the subject, relates the case of a French countess, who was imprisoned during the Revolution, in consequence of being accused of carrying on a treasonable correspondence with her husband, an emigrant. She was ordered to be examined by two of the best midwives in Paris, and they declared her not pregnant. She was accordingly beheaded upon the guillotine, and her body taken to the School of Anatomy, where it was opened by Baudelocque, who found twins in the fifth month of pregnancy.

A great many mistakes of this kind have been made, first and last, in the medical world. Not many months ago, in this city, two eminent practitioners—one of them in particular being one of the most celebrated in the world—

had a patient whom it was declared had an internal tumor, from which it would not be possible for her to recover. The physician who attended principally in the case, went often to visit the lady, *to crowd up the tumor*, as it was called. After a time the physician was sent for early in the morning, to visit the case, as the lady was suffering a good deal of pain. He said he would make it his first visit to see her. On arriving, what must have been his surprise to find his patient already delivered of a fine boy!

The signs of pregnancy, then, are very difficult to understand; or, in other words, to ascertain whether a woman is really pregnant in a given case, may be a very difficult matter, if not absolutely an impossible one.

You will agree with me, I am confident, that the old custom of impanneling a jury of twelve matrons, where a court of justice wished to ascertain whether a woman was quick with child or not, was not a good one. If the most experienced physicians and midwives are liable to great mistakes in these matters, how much more so those who have paid little attention to the subject.

But it is my purpose in the present letter to speak of the ordinary signs, changes, and appearances which will usually be found to be accompaniments of this state; and that you will feel a deep interest in the subject, I am already fully aware.

Suppression of the menses, as you well know, is not necessarily a sign of pregnancy. As a rule to which there can be but few exceptions, menstruation and pregnancy do not go on together. Indeed, many writers contend that there can never be menstruation in connection with fecundity. Others assert the contrary. But the rule is,

pregnancy and menstruation cannot be present at the same time. But, as we have seen elsewhere, there is often suppression of the menses from various other causes than the one we are now considering.

Nausea, and vomiting in the morning, constitute one of the most common signs of pregnancy; but it is to be remembered also, that, in a considerable proportion of cases, no stomach-sickness, whatever, is experienced. On the other hand, likewise, many persons have nausea and vomiting arising from other causes than pregnancy.

If the child dies in the mother's womb, it is believed that nausea and vomiting, for the most part, cease immediately.

An irritable state of the stomach is one of the most common symptoms in the early part of this period. The breasts often, at first, grow smaller; after two or three months, they enlarge, and sometimes become painful. A fluid, somewhat resembling milk, only more watery, is not unfrequently observed to ooze from these parts during the early months of gestation. The nipple is seen to be surrounded by a brownish circle; this is at least true in many cases. In the beginning of pregnancy, the abdomen does not necessarily grow larger, as might at first be supposed. Indeed, good authorities assert, that in the commencement of the period, it becomes rather flatter than formerly; and that when it does first increase in size, it is rather from inflation of the bowels, particularly the colon, than from expansion of the uterus. An enlargement of the abdomen may arise from such a variety of causes as the obstruction of the menses, dropsy, diseases of the ovaries, or of the womb. This sign must necessarily always be looked upon with caution, especially in those cases where there is a strong desire for progeny.

I remarked that a fluid resembling milk, is sometimes one of the signs of pregnancy. When this secretion takes place, it is looked upon by many of those who are not well-informed on the subject, as being a certain sign of this state. But it should be remembered, that not unfrequently when the menses cease from some other cause than that of pregnancy, a milky fluid is secreted in the breast. This has been known, likewise, to take place in women who had passed the child-bearing period, in young girls and infants, and even in men. Dr. Dewees gives us a case which is well calculated to impress upon us how careful we should be in forming our judgment in cases of this kind. It is as follows:

"I once knew a considerable quantity of milk form in the breasts of a lady, who, though she had been married a number of years, had never been pregnant, but who, at this time, had been two years separated from her husband. She mentioned the fact of having milk to a female friend, who, from an impression that it augured pregnancy, told it to another friend, as a great secret, who, in her turn, mentioned it to another friend; and thus, after having enlisted fifteen or twenty to help them keep the secret, it got to the ears of the lady's brother. His surprise was only equalled by his rage; and in a paroxysm he accused his sister, in the most violent and indelicate terms, of incontinency, and menaced her with the most direful vengeance.

"The lady, conscious of her innocence, desired that I should be sent for forthwith, and insisted her brother should not leave the room until I arrived. Some time elapsed before this could be accomplished, as we were several miles from each other, during the yellow fever of 1798. During the whole of this time she bore his threats

and revilings with almost exemplary patience and silence. I at length arrived; and, in the presence of the brother and a female friend, she informed me of what I have just stated, and said, her object in sending for me was, to submit to such an examination as I might judge proper to determine whether she were pregnant or not. She would not permit her brother to leave the chamber, and I conducted the examination without his withdrawing. This thing turned out as I had anticipated, from the history given at the moment, of her previous health. I pronounced her not pregnant; and she died in about eight months after of pulmonary consumption, in which disease obstruction of the catamenia is not an unfrequent occurrence."

Quickening is one of the most unequivocal of the signs of pregnancy. This usually happens about the middle of the period. It may occur, however, as early as three months; not unfrequently, probably, at the end of four months; and sometimes considerably later than the middle of the period, or four and a half months. In quickening, "the motion is first felt in the hypogastrium, and is languid and indistinct, but by degrees it becomes stronger. It is possible for women to mistake the effects of wind for the motions of a child, especially if they have never borne children, and are anxious for a family." But the sensation produced by wind in the bowels is not confined to one spot, and is very often referred to a part of the abdomen where the motion of a child could not possibly be felt. It must, however, be acknowledged that sometimes a sensation seems to be produced, distant from the uterus, and higher than the child can actually lie. This may be from motion communicated through the folds of the intestines, and the result shows that the woman was not mistaken in her sen-

sation. It is not to be supposed that the child is not alive previous to the period of quickening, though the code of criminal law is absurdly founded on that idea. The child is alive from the first moment that it becomes visible, but the phenomena of life must vary much at different periods. It is seldom felt to move until after the ascent of the uterus out of the pelvis. Does the motion of the child arise from any change of the phenomena of life at that time in the child itself, or from the muscular power becoming stronger, or from the uterus now being in a situation where, there being more sensibility, the motion is better felt? All of these circumstances probably contribute to the sensation, which becomes stronger as the child acquires more vigor, and as the relative proportion of liquor amnii decreases. This fetal motion, however, is not to be confounded with the sensation sometimes felt by the mother, from the uterus rising out of the pelvis, and which precedes the feeling of fluttering.

If this elevation of the fetus takes place suddenly, the sensation accompanying it is pretty strong, and the woman, at the time, often feels sick or faint; and in irritable habits, even an hysterical fit may attend it. From the time when this is felt, women are said to have quickened, and they afterward expect to be conscious of the motion of the child.

The motion of the child, in many, soon increases, and becomes very vigorous; in others, it is languid during the whole of pregnancy; and in a few cases scarcely any motion has been felt, although the child at birth be large and lively. The morning-sickness, and many of the sympathetic effects of pregnancy generally abate after this, and the health improves during the last two quarters.

There is also liability to mistake in regard to quickening, as well as in the other signs of pregnancy. Thus, hysterical persons in particular may feel motions in the bowels, or imagine that they feel them, which they suppose to be the motions of a living child. This is much more apt to occur with those who are very desirous to be pregnant. Other persons also, doubtless, who are not hysterical, may, from flatulency in the bowels, be led into errors in this matter.

In some cases it is probably impossible for the female actually to determine whether pregnancy exists. These cases, however, are exceptions to the rule. As a general thing, there is no difficulty in determining by, or after, the middle of the period, whether a woman is with child.

A manual examination, by a competent physician or midwife, is the most certain test. In ascertaining pregnancy after the middle of the period, there is some liability to error. Practitioners of great experience, as I have before remarked, have made errors in regard to this matter.

Seeing, then, how difficult it is to determine positively beforehand in any case whether pregnancy really exists, you will, I am confident, look charitably upon those who are suspected of this state, without a full and sufficient cause. "It is better that ninety-nine wicked persons should escape, than that one righteous one should be punished."

LETTER VIII.

DURATION OF PREGNANCY.

Difficulties of Ascertaining it—Rules by which it is to be Known—At what Age can a Fetus Live?

The question relating to the duration of pregnancy is a difficult one. The general belief is, that the term lasts about nine calendar months. We hear spoken of "nine calendar months," "ten lunar months," "forty weeks," or "two hundred and eighty days," as indicating the length of this period.

It should be recollected, that there may be a material difference between nine calendar months and ten lunar months, as also between nine calendar months and forty weeks. Nine calendar months may fall short of forty weeks by from four to seven days. Thus, it may be two hundred and seventy-three days, two hundred and seventy-four, two hundred and seventy-five, or two hundred and seventy-six days, instead of two hundred and eighty days, or forty weeks.

What are the means by which the true duration of pregnancy, or an approximation thereto, may be established?

1. *Cessation of the menses.* This is by no means an infallible sign, as every one knows. The menstrual function, as we have already seen, often becomes obstructed from

other causes than pregnancy. Conception may take place without the woman being regular. Thus, it may occur some months, even, after the menses have ceased from other causes. If, then, the reckoning should be made to commence at the time when cessation occurred, it would be found very fallacious in many cases. On the other hand, menstruation may occur one or more times after conception has taken place. So, also, it appears to be well established, that pregnancy may occur before menstruation ever appeared with the individual.

2. *The period of quickening.* This, too, is not a reliable source of reckoning the period of gestation. Quickening sometimes takes place, doubtless, before it is perceived. It takes place, also, at very variable periods, as I have elsewhere remarked; sometimes as early as the third month, sometimes not until the fifth, or, perhaps, the sixth. The range of quickening may be said to extend over a period of at least sixteen weeks. Thus it will appear that this mode of reckoning is by no means to be depended upon, although it often has been.

3. *Peculiar sensations soon after conception.* Some persons experience peculiar sensations within a day or two after conception. This is not true of every case, nor does the same individual experience these symptoms at each time of pregnancy. At one time she may have them, and at another time not.

4. *Nausea and vomiting.* These symptoms are too indefinite to enable us to form any just idea of the time when conception takes place. Some individuals do not experience them at all; some experience them very soon, almost immediately after conception; others not until the lapse of weeks, in some cases, probably months.

5. *Coition.* In the generality of cases it is impossible to know at what precise period pregnancy has commenced, because it is not known when the effectual coition took place. Now and then, however, such cases do occur; and in such instances, which are, on the whole, very rare, we find that the period of pregnancy varies somewhat as to its length.

Another method of reckoning has been to count from the time of the last menstrual discharge. Dr. Merriman, of London, has published a table of the births of 144 mature children, calculated from the day after the last menstruation was perceivable. According to this table

3	were born in the	37th	week.	22	were born in the	41st	week.
13	"	38th	"	15	"	42d	"
14	"	39th	"	10	"	43d	"
33	"	40th	"	4	"	44th	"

Dr. Guy, of London, gives the following cases:

A case by Dr. Nixon	273 or 276	days
" Dr. Montgomery	280	"
" Dr. Forster, of New York	283 or 285	"
A case before Lancaster Assizes	284	"
A case by Dr. Dewees	286 or 288	"
" Dr. Desormeaux	290	"
" Dr. Reid	292 or 293	"

The results of these cases are as follows:

Average of the seven cases	284 or 285	days.
Minimum "	273 or 276	"
Maximum "	292 or 293	"
Range "	16, 17, 19, or 20	"

Excess above 280 days, 12 or 13 days.

Excess above nine calendar months, 16 or 17 to 19 or 20 days.

Thus it is plain that the period of gestation is more variable than some have supposed.

The same thing is also observed in animals, where, in general, a much more true record can be kept, than is possible in regard to the human species. M. Tessier, in France, caused a set of observations to be made on the duration of pregnancy in 160 cows, which commonly go nine months with young. His table is as follows:

3	brought forth	on the 270th day.
50	"	270th to the 280th day.
68	"	280th to the 290th "
20	"	300th day.
5	"	308th "
14	"	241st to the 260th "

There is, as will be seen in this table, a variation of sixty-seven days in the time a cow may carry her young.

A similar variation has been found in mares as cows, respecting the time of gestation. The same author—M. Tessier—made observations which were extended to 102 mares. The shortest period at which they brought forth was two hundred and forty-one days, the longest at three hundred and eight days.

Where there is no knowledge as to the precise time when an impregnation took place—and such is the fact in almost all cases with the human subject—a very good mode of reckoning is this: first ascertain the precise time when the menses last appeared, then reckon two weeks, at which time consider pregnancy as beginning. Nine calendar months, or forty weeks, which may vary somewhat from that period, will be about the time at which labor will ordinarily come on.

Another method is as follows: Quickening takes place at about the twentieth week; add twenty weeks more to the previous time, and we have an approximation to the

truth. But, as I have elsewhere shown, the time of quickening is subject to a good deal of variation, namely, from the twelfth to perhaps the thirtieth week.

I think it will seldom be found to happen that labor occurs short of forty weeks, or 280 days, after the last appearance of the menses. But it is not out of place for me to inform you that medical men have varied considerably in regard to the duration of pregnancy. Thus, Dr. Guy has quoted five authorities, of greater or less eminence, to wit:

Sir Charles Clarke; 40 weeks—280 days.

Dr. Blegborough; 39, usually 40 weeks—273–280 days.

Mr. Pennington; 37 weeks; some, 40 weeks—259–280 days.

Dr. Gooch; a day or two before or after nine calendar months—271, 274, 275, or 278 days.

Dr. D. Davis; a day or two under nine calendar months.

The question as to the length of time it is necessary for a child to remain in the mother's womb, in order to enable it to live, or to render it *viable*, as the term is, has been a very puzzling one to writers on medical jurisprudence. On this subject, I do not know that I can interest you in any better way than to give you some of the remarkable examples on record which go to establish the point.

"I have seen," says Belloc, "a girl who, at birth, was only twelve and three quarters inches in length, whose skin was of a marbled redness, whose head was covered with down, whose nails were imperfectly formed, and who altogether bore a close resemblance to a young flayed rabbit. She was fed with the spoon for eight days, because she was unable to suck. Nevertheless, she is not

only at the present moment alive, in her seventeenth year, but is likewise an extremely clever, amiable girl, above the middle stature, graceful in figure, and gay in her disposition. The mother could not fix with precision the date of her conception, but was convinced she was not at the term even of seven months. I considered her at six months, at the utmost."

Dr. Guy, of London, mentions a case given by Dr. Rodman, in which he describes the mother as "more cautious in her decisions, accurate in her observations, and steady in her deportment than what is usually met with in society." She had borne five children previously, and in this instance "was confident that the period of her gestation was less than nineteen weeks." Premature labor came on in consequence of fatiguing exertions, and she was delivered of a living male infant.

"Not daring to allow the washing of the infant's body, he was speedily wiped, and wrapped in flannel, with only an opening in the dress around his mouth for the admission of air; and by the time the dressing was over, the mother was ready to take him into the warm bed with herself. It is common, if there be much apparent weakness, to feed a child the first twelve hours after birth very frequently, yet, in this instance, although the child was weak, no feeding was attempted until beyond that time; the nourishing heat with the mother in bed was relied on. On the following day, the head, body, and extremities of the child were surrounded with fine cotton wool, pressed to appear like cloth, to the thickness of two or three folds, and over that the flannel, as before; and again the child was given to the mother in bed. His vital energy was so deficient, that even with this dress, of himself, he was unable to support the

degree of warmth which was necessary to his existence. The heat of a fire was evidently injurious, as he soon became weaker when exposed to it; while the warmth of the mother in bed enlivened and strengthened him. Too much heat induced a sickly paleness of his face, with an obvious expression of uneasiness in his countenance; and the abstraction of heat, even by tardily undressing his head, brought on a nervous affection, or starting of the muscles all over his body. From seeing how these morbid affections were induced, the child was kept regularly and comfortably warm, by the mother and two other females alternately lying in bed with him, for more than two months. After this, he could be left alone from time to time, but was still undressed very cautiously, and only partially at any one time. It was not till the child was three weeks old that the length or weight of the body could be ascertained. The length was found to be thirteen inches, and the weight 1 lb. 13 oz. avoirdupois. It was extremely difficult to get the child to swallow nourishment the first week; the yellow gum soon came on, and the thrush seized him severely on the eighth day, and was not cured till the end of the third week. During the first week, he was fed with toasted loaf bread, boiled with water, sweetened, and strained through fine linen; in the second week, twenty drops of beef-tea were added to the two or three tea-spoonsful of his mother's milk, and in two days afterward he made exertions to suck. His mother's milk was gradually substituted, at least in part, for the panada, though this was still continued occasionally, with a few drops of port wine. Under this careful management he attained the age of four months, at which time his health and excretory functions were peculiarly regular."

Dr. Guy has arranged a table showing the lengths and weights of children reported to be born during the fifth and sixth months of gestation, with the assumed age and the probable age, according to estimates and observations which he had made and collected from various authors on the subject. It is as follows:

Author.	Length.	Weight.		Survived its Birth.	Asserted Age.	Age according to Estimates and Observations.
	Inches.	lb.	oz.		Days	
Rodman	11–13 at 3 w'ks.	1	13	1 yr. 9m.	133	5 months possibly.
Outrepont	13½	1½	0	8 years	175 or 189	6 months.
Belloc	12¾	-	-	17 years	6 months	possibly 5 months.
Bucholtz	14	1½	0	2 days	189 days	6 months.
Kopp	12¼	2	0	4½ days	182	6 months.
Fleischmann	11½	1	5	8 days	168	possibly 5 months.
Christison	13	1	7	8½ hours	167	possibly 5 months.
Mr. Thomson	12½	1	8¾	3½ hours	5 months	5 months.

Thus, it would appear, that it is possible for a child to live when born at about the end of the sixth month of fetal life, and, perhaps, somewhat earlier. But these cases must, I think, be rare, and not according to the general rule.

When a child is born, some idea may be formed respecting its age by the appearance it presents. A description of the signs of maturity and immaturity, founded upon that of two French authors, Foderé and Capuron, will serve to contrast the one with the other.

The signs of maturity are the following:

The ability to cry as soon as the child reaches the atmospheric air, or shortly thereafter, and also to move its limbs with facility, and more or less strength; the body being of a clear red color; the mouth, nostrils, eyelids,

and ears perfectly open; the bones of the cranium possessing some solidity, and the fontanelles not far apart; the hair, eyebrows, and nails perfectly developed; the free discharge of the urine and meconium in a few hours after birth; and finally, the power of swallowing and digesting, indicated by its seizing the nipple, or a finger placed in its mouth.

The signs of immaturity, on the other hand, are the following:

The length and volume of the infant—much less than those of an infant in full term; it does not move its members, and makes only feeble motions; it seems unable to suck, and has to be fed artificially; its skin is of an intense red color, and traversed by numerous bluish vessels; the head is covered with a down, and the nails are not formed; the bones of the head are soft, and the fontanelles are widely separated; the eyelids, mouth, and nostrils closed; it sleeps continually, and must be preserved by artificial heat; and, lastly, it discharges its urine and meconium imperfectly, and often after a long interval.

You will, of course, readily comprehend that the appearances of children at birth, even of the same age of fetal life, must be subject to a good deal of variation. Some are much stronger than others, and the size and weight also varies a good deal. At one time a mother may have a very large, strong, and well-formed child, and at another a small and weak one. The size, however, does not determine the healthfulness of a child.

LETTER IX.

MANAGEMENT IN PREGNANCY.

Importance of Attention to the Health at this Period—Clothing, and its Effects—How to Regulate it.

THERE is, perhaps, no period of life in which the management of the health becomes a matter of more importance than in pregnancy. A little mismanagement here is not unfrequently sufficient to cause the individual life-long suffering and disease. I have known a woman, in the fifth or sixth month of pregnancy, to go to an evening party, become excited and mirthful, remain late at night, eating and drinking, as is customary on such occasions, and perhaps, worst of all for a person in such a condition, engage freely in the dance. Immediately, thereupon, that woman has been taken with uterine hemorrhage, that ended necessarily in abortion, a circumstance always more unfavorable to the constitution than labor itself. I have known such a woman to be not only in a very precarious and dangerous situation at the time, but to experience for many months afterward an extreme prostration of the general health, and an amount of suffering from depression of spirits and nervousness, with all its multitudinous train of ills, which cannot be conceived of only by those who have suffered them. I have known a woman commit imprudences, such as doing a great deal of work at one time, when she was generally indolent in her habits; and thus, by the indolence

and overworking alternately, abortion, hemorrhage, attended with fainting—and which has brought her to the very verge of death—has been caused. I have known, too, imprudent women, who, dissatisfied with themselves and their condition, have taken powerful medicines, with the idea of removing their unwelcome obstructions, and thus to bring upon themselves a train of evils and sufferings which have ended only in the sleep of death. I have known, too, women to be exceedingly injured by the gross habits of their prurient husbands during this period. The abominable and disgusting practice to which I here allude is, I fear, exceedingly common. It cannot be too much reprobated or spoken against. He that uses his wife like a brute during this time, is, to say the least, little better than those who go away from home in quest of illicit intercourse.

Women, too, are liable to accidents during this period. I lately had a case in this city (New York), of a strong, healthy woman, who had borne a number of children, and, at about the end of the seventh month, an unfortunate circumstance occurred, in which no person was to blame, and by which she became so much and so suddenly frightened as to be prostrated on her bed for nearly a week. She did not recover the general tone of the system during the remainder of the period; and the day after the birth of the child, it was seized with fits resembling those arising from fright. The child, as well as the mother, was very feeble. By very prudent management, however, both finally recovered.

All great and powerful excitements, whether of mind or body—every thing, in short, that is not consistent with a uniform, even tenor of both mental, moral, or physical

life, should, as far as possible, be avoided. If ever woman's life is to run like the smooth and placid stream, let it be at this time, on which so much, not only of her own health, but that of her offspring, depends.

CLOTHING.

The great advantages to be derived from a proper regard to the wearing apparel in pregnancy, leads me to make in this place some general remarks on the subject, which I shall follow with more special advice in regard to this particular period.

It is an old maxim, that those who accustom themselves to go habitually clad in thin garments are the most hardy, vigorous, and free from disease.

The question then arises, how far is it safe, in each individual case, to diminish the amount of clothing worn?

It is very evident that no *great* change should be made *suddenly.*

By practicing the various natural means of hardening the system and invigorating the general health, such as daily bathing, going often into the open air, and avoiding overheated and illy-ventilated rooms, and, in short, pursuing such a course of daily regimen as sound physiology dictates, almost all individuals may very soon bring themselves to need a much less amount of clothing than is usually worn.

At the far-famed hamlet Græfenberg, in Germany, many persons wear very thin clothing, even when the weather is frosty, and the snow deep upon the ground. According to the rules of fashion there, no cravat of any kind need be worn upon the neck. Even the breast may be left ex-

posed, to receive the invigorating effect of the cool, fresh air. It is amusing even, to see there, as I have often done, old men who have become so hardy and vigorous that they could brace themselves up against the snow-storm with bare and uncovered breasts, with a thin coat, and perhaps no vest; and all this with apparent luxury and comfort. It is indeed surprising to witness what habit is sufficient, in a short time, to accomplish in these matters.

LACING.

Some persons seem to suppose, that if they dispense with the words fashion, corsets, stays, and the like, they have nothing more to do in the matter of tight clothing; but it should be remembered, there may be *lacing*, that is, *compression* of the body, by other means than mere corsets, corset-strings, and stays. A dress may be so tight—and such there often are—as to *lace* the body as effectually as if the strings were actually used.

It is to be hoped that the times will, ere long, change; that it will become as fashionable for females to vie with each other as much in possessing a full, plump waist, as it has hitherto been to possess a small one. Why may it not be, and may we not imagine that cotton wadding, etc., may be yet brought into requisition to remedy the forms of nature about the waist, as now in other parts of the body? At any rate, fashion can do any thing; and since it is the order of fashion to change, we may, in time, expect a different state of things.

It is well remarked by Dr. Andrew Combe, that "already sounder views of the nature of the human frame, added to the lamentable lesson of experience, have con-

vinced many mothers that the surest way to deform the figure, and to prevent gracefulness of carriage, is to abolish exercise, and enforce the use of stiff and tight stays; and that the most effectual way to improve both, is to obey the dictates of nature in preference to the inspiration of ignorance. It was not by the use of tight bands and stays that the classic forms of Greece and Rome were fashioned; and if we wish to see these reproduced, we must secure freedom of action for both body and mind, as an indispensable preliminary. If the bodily organization be allowed fair play, the spine will grow up straight and firm, but at the same time graceful and pliant to the will, and the rest of the figure will develop itself with a freedom and elegance unattainable by any artificial means; while the additional advantage will be gained, of the highest degree of health and figure compatible with the nature of the original constitution."

Let us look at this matter a little more in detail.

1. It is a law of the living body, that in order for easy, healthful, and natural motion to be put forth, no unnatural or artificial pressure must exist.

If we wear a shoe that is too tight, we know how much walking is impeded, that, perhaps, best of all exercises; and that if this pressure be continued for a considerable time, nature revolts at our waywardness, and produces for us a corn. The parts are made to grow out of proportion; the toes crooked, bent, and ugly in appearance.

So, too, if a person wears a tight cravat, we see how soon circulation is impeded, and headache follows.

Compare, too, the breathing of an individual with a full, healthy, and well-expanded chest, that has not been exposed to artificial pressure, with that of a man or a woman

which has been for years contracted to the smallest span; the one can scarce mount a flight of stairs for want of breath, while the other can climb the mountain-side, and be but the more invigorated thereby.

2. Pressure upon any part of the system *impoverishes* that part.

It is said of the Chinese women, that many of them wear shoes so tight that their feet remain as small as in childhood. If a person is in the habit of stooping forward too much, or of leaning against a desk a considerable length of time in the counting-house or at school, we see the chest becomes enfeebled and sunken. The general law is, artificial pressure impoverishes any part of the system to which it is applied.

3. Look at the skin. It is naturally a breathing organ.

If you keep the air from the skin, your system feels smothered. Does not every one know how refreshing it is, on a hot, sultry day, to allow the atmosphere to circulate freely about the surface?

Every lady, however genteel, however *pinched up* in her fashionableness she may choose to be when she goes out before the world, takes off her clothing from instinct as soon as she is alone by herself again.

Even in cold weather, smothering the skin is productive of uncomfortable sensations; and all persons may observe, that in lying down to sleep by day, with the usual amount of clothing on, they become feverished, unrefreshed, and awake with at least a general lassitude, and very likely with a severe headache, or other uncomfortable feelings of the head. On the other hand, if there is necessity for sleep during the day, and the individual lies down with

suitable clothing, and yet sufficiently covered to remain comfortable, a refreshing sleep is obtained.

Ladies especially who, from pregnancy or other reasons, have need of their forenoon "naps," will do well to remember this advice. So also infants should always be undressed when they are allowed to go to sleep. Thus much for the skin as a *breathing* organ.

4. But perhaps the worst of all physical injuries produced by clothing, is that exerted upon the chest. We read that *in the blood of the animal is the life thereof.* In the stomach the digestible portions of the crude materials of food are formed into chyme. The chymous mass passes then onward through the pylorus into the duodenum, or second stomach. Here the chyle is formed, which is a step nearer blood than chyme. The lacteals suck up this milk-like fluid called chyle, and carry it into the portal circulation, to commingle with the blood. The blood, in this crude state, is sent to the liver, where a still further purifying process goes on. After this the venous blood passes to the heart, from whence it is sent to the lungs, there to become arterialized, or rendered in its purest state. Thence it passes back again to the left side of the heart, from which it is sent to all parts of the system, to afford life, growth, energy, and strength.

You will now perceive that this blood-restoring process, which, by the wonderful mechanism of nature, goes on in the lungs, is a very important one to the health. Here, in myriads of air-cells contained in the lungs, the surface of which amounts to at least as many superficial inches as the entire external skin, it is purified, and rendered fit for the purposes of life.

We see, too, that when the system is left free to perform

its own normal functions, the chest expands freely at every inspiration of air we breathe; and in proportion as this expansion of the chest is full and free, will be the amount of air inspired, and, as a consequence, the amount of oxygen, or the blood-purifying principle, will be proportionately augmented. On the other hand, if, by compression of the chest, the full, free inspiration of air is hindered, less oxygen will be received into the system, and, consequently, the blood will become less pure.

A woman who laces herself tightly about the waist cannot be supposed to breathe hardly more than one half the amount of air she should do. How, then, in the name of common sense, can she expect to enjoy health? Every organ of the human system must be allowed its free exercise, or a deterioration of the general health must be the inevitable result. We might as well expect to have good health with only half the amount of food we should have, as with half the amount of the air we should breathe.

Thus, you perceive, if any unnatural pressure is made upon a part of the system, motion is impeded, and without free motion, health cannot exist; that with such pressure, parts upon which it is made are impoverished; that if clothing is worn too tightly about the body, the breathing function of the skin is hindered, and that debility is the result; that in particular, if the chest is compressed, as is often done by the use of stays and corsets, tight dresses, and the like, that important function of respiration is impeded, and that thus the health must inevitably sink. These principles cannot be too much studied, or too much carried out in practice, in order to secure the firmest and most enduring health.

There are also other ill effects than those we have

glanced at that are caused by tight clothing. Thus, in compressing the chest, the abdominal organs are also made to suffer. The functions of the stomach cannot go on properly; the food is not digested as it should be; the liver cannot act freely; the bowels become torpid and constipated; the uterus is pressed out of its place, causing prolapsus uteri, or falling of the womb, as it is called; neither the blood-making, the blood-purifying, nor the blood-distributing processes can go on healthfully. Thus the entire system is made to suffer merely from the pressure made upon the external parts of the body.

Do you ask me, how does all this bear upon the subject of pregnancy? I answer, that if in ordinary states of health, clothing should be of such a character as at all times to allow of the most free and unrestrained movement of every part of the system, how much more important and imperative is this consideration with those in pregnancy. And, accordingly, as is well remarked by Dr. Eberle, "The custom of wearing tightly-laced corsets during gestation, cannot be too severely censured. It must be evident to the plainest understanding, that serious injury to the health of both mother and child must often result from a continued and forcible compression of the abdomen, while nature is at work in gradually enlarging it for the accommodation and development of the fetus. By this unnatural practice, the circulation of the blood throughout the abdomen is impeded: a circumstance which, together with the mechanical compression of the abdominal organs, is peculiarly calculated to give rise to functional disorder of the stomach and liver, as well as the hemorrhoids, uterine hemorrhage, and abortion. The regular nourishment of the fetus, also, is generally impeded in this way: a fact which is frequent-

ly verified in the remarkably delicate and emaciated condition of infants born of mothers who have practiced this fashionable folly during gestation. It may be observed, that since the custom of wearing tight-laced corsets has become general among females, certain forms of uterine disease are much more frequent than they were sixteen or eighteen years ago." Hence, as has been judiciously remarked, "it ought to be the first duty of the young wife, who has reason to believe pregnancy to have commenced, to take special care so to arrange her dress as to admit of the utmost freedom of respiration, and to prevent even the slightest compression of the chest or abdomen."

If I could write as impressively as I feel earnestly on this subject, how would I warn you, my friends, against the evils of too tight and illy-adapted clothing in pregnancy. How often have I pitied the newly-married woman, who seems really to be under an unavoidable necessity of conforming to fashion—so much are we all of us under the world's influence—that her health and bodily comfort have been deteriorated and greatly interfered with. How often, too, have I wished that the day might hasten in which there would be a wide and general dissemination of light on this subject, so that people might not only *know* the truth, but be able to *practice* it. That such a day is not far distant, I do most confidently hope.

LETTER X.

MANAGEMENT IN PREGNANCY.

Of Solar Light—Its Effects on Life and Health—Air and Exercise—Rules of Management.

Among the life-agents, solar light is one of the most important.

Anciently the sun was considered as a deity. In most countries it was called the "Supreme Being," the "Father of Light," "Jupiter," "Jehovah," the "Creator of all living matter," the "residence of the Most High."

All nations, in all periods of time, have been impressed with the magnificence and power of the great center of the solar system.

That the sun's light has a powerful influence on the living body, every one will readily admit. Knowing the reviving influence of a moderate degree of solar heat, the ancients had terraces on their house-tops, called soralia, in which, to use their own expression, they took a solar air-bath.

According to physiological experiments, it has been shown, that if tadpoles be nourished with proper food, and at the same time exposed to the constantly renewed contact of air, so that their respiration may be fully carried on while they remain in their fish-like condition, and, at the same time, be entirely deprived of light, their growth continues, but their metamorphosis into the condition of

air-breathing animals is arrested, and they remain in the condition of a large tadpole.

The rapidity with which water-flies, insects, etc., of pools, undergo their transformation, is found to be much influenced by the amount of light to which they are exposed.

If equal numbers of the eggs of the silk-worm be preserved in a dark room, and exposed to common daylight, a much larger portion of the larva are hatched from the latter than the former.

A great variety of facts might be given in proof, that light exercises an important influence over the processes of development in animal life.

"Those who live in mines, or dark caves," says Dr. Andrew Combe, "and who are rarely exposed to the light of day, present a pale, relaxed, sallowness of skin, which contrasts with the ruddy freshness of country people and others living much in the open air."

Every one knows how much paler and more delicate those are who remain mostly, or entirely, within doors. The inhabitants of villages, towns, and cities, may often be known by the lighter color and delicacy of skin, which arises from their occupation being more in the shade than that of the country people.

The extreme paleness and depression of the poor population resident in the dark lanes of crowded cities, medical observers have often noticed, as a striking exemplification of the effects of a want of light.

Light is also well known to have a great influence in preventing deformity.

Those who are confined much within doors, or that are brought up in cellars, mines, and the dark places of cities,

This book is the prop
COOPER

where the sun can never come, have much oftener defor mity of body than such as have free access to the light.

Among those nations that wear but little or no clothing, thus leaving the system more to the influence of light, it is well known that there is a remarkable freedom from this form of disease.

Rickets is much more common in the dark, dirty parts of cities, than elsewhere.

There is, however, of course, in all these instances, other agencies concerned, than mere light. The effects are more or less modified by a variety of causes, as, for instance, the want of a due circulation of pure air in dark and confined places produces debility of the body, which always tends to deformity and disease. But it is demonstrably true, that the want of light is one of the most prominent among the many causes of bodily deformity.

In curing diseases, and the general management of the sick, light, too, is an important agency.

It is said by Sir A. Wilie, who was long at the head of the medical staff in the Russian army, that the cures of disease on the dark side of an extensive barrack at St. Petersburg, have been uniformly, for many years, in the proportion of three to one, to those on the side exposed to strong light.

In one of the London hospitals, with long range of front age, looking nearly due north and south, it has been said by observers, that a residence in the south wards is much more conducive to the welfare of the patients, than in those on the north side of the building.

Light is a very important matter as regards the health of the eyes.

We find nowhere so much disease of these important

organs, as among the poor people who inhabit the dark, filthy, and illy-ventilated portions of large cities.

This is true of infants, who are, more than others, kept within doors. It is, indeed, said, that in a certain dark alley of the city of Boston, infants are not unfrequently born blind.

Fish that live in the pools of the Mammoth Cave, in Kentucky, we are told, have no sight.

Thus, my friends, I have spoken at length on the subject of light; almost more than was necessary, perhaps, you will say. But it is a matter which has not been much spoken of; and this, if there is need, is my excuse.

What *practical* lessons are we to gather from facts like these?

Shall ladies darken their parlors and sitting-rooms, thus making them more like dungeons than pleasant apartments for use?

Shall they practice reading, sewing, and the like exercises in rooms so poorly lighted that a person coming from the open air can scarcely discern one object from another?

Shall they remain in-doors as much of the time as is possible, lest the light should render their skin of a somewhat less delicate hue?

Shall they, when they must needs come out for a walk, wear a thick, heavy, and perhaps three-double vail, in order to preserve that delicacy, of which women too often appear to be so fond?

Shall they go on thus keeping up this so-called beauty and delicateness, even if it be at the expense of ennui, debility, nervousness, and general ill-health?

Or, on the other hand, shall they go often and freely into the open air, walking miles every day; or what is

perhaps better, engage in active, and, if possible, out-door pursuits, a part of each day?

In the one case, health is, as a general thing, easy to obtain; in the other, impossible.

As children know by instinct, and physiologists by scientific facts, human beings must go often into the open light of day, in order to insure firm and enduring bodily health.

Nor are the good effects of light less important on the feelings, habits, and mental manifestations of the individual.

AIR AND EXERCISE.

Would that I could now impress upon your minds, in some good degree, the importance of AIR and EXERCISE in pregnancy.

See how well the Indian women get along with child-bearing; and you know they are active in their habits, and go a great deal in the open air.

How well, too, the poor, laboring people, the Irish and the Germans, get along in having children; and are not they *obliged* to work? Labor! verily thou art a blessing which we poor mortals do but poorly prize!

I must say to you, then, in my humble way, to all of you who are pregnant, DO NOT FAIL TO WORK. Work regularly—not too much at a time, but little and often, avoiding all extremes. Go out, too, EVERY DAY, and get the fresh air and light of heaven. So will you be rewarded for every thing you do.

LETTER XI.

MANAGEMENT IN PREGNANCY.

Of the Diet Proper in this Period—Animal and Vegetable Food—Superiority of the latter—The Drink.

I HAVE in different places, in these letters, made some remarks on the subject of food and drink. I thought it necessary, however, to be a little more explicit on so important a matter.

I have in another letter said some things on the subject of those strange and peculiar *longings* which women sometimes experience in pregnancy, and have given you some advice on that point, which I wish you also to bear in mind in this place.

Have you not often heard women remark, that when they are pregnant they ought to eat more food than at other times, *because they have two to support!*

It is my duty to tell you in all frankness, as also earnestness, that if any one makes such a plea an excuse for dietetic indulgence; or if any one, from ignorance on the subject, sets to eating more freely in pregnancy than she would do at ordinary times, she will be very liable to harm herself seriously; and more than that, she may thus actually destroy her child, and have an abortion If she should be so fortunate as to run clear of this sad evil, she would yet be liable to indigestion, costiveness, diarrhea, and all the

long list of troubles that grow out of a disordered state of the stomach and alimentary canal at this period of her life.

Let us make a little calculation in regard to this matter of "having two to support" in pregnancy.

The growth of the fetus, as depending upon the mother, is in proportion to the length of time it is destined to remain in the womb.

In the first place, let us endeavor to ascertain the average weight of infants at birth. I do not know that we have any tables in this country that throw light upon the subject. We can, however, go to France, where the industry of physicians has reduced almost every thing connected with the medical art to figures and rules.

At the *L'Hospice de la Maternite*, in the city of Paris, the following results were ascertained in regard to 7077 cases of births:

34	weighed	from 1	to	1½	pounds.
69	"	2	"	2½	"
164	"	3	"	3½	"
396	"	4	"	4½	"
1317	"	5	"	5½	"
2799	"	6	"	6½	"
1750	"	7	"	7½	"
463	"	8	"	8½	"
82	"	9	"	9½	"
3	"	10	"	10½	"

The average weight of children, then, at birth, would appear to be only between six and seven pounds. To make our calculation a safe one, we will suppose the average to be seven pounds.

There is also to be taken into the account the placenta, the membranes, and the *liquor amnii*, with which the child

is surrounded. We may, then, make the following calculation:

Weight of the fetus, 7 pounds, or	112	ounces.
" placenta and membranes.	16	"
" liquor amnii.....	16	"
In all.....	144	"

The number of days in a normal pregnancy is about two hundred and eighty. Reckoning three meals to a day—and some average more than this number—we have eight hundred and forty meals in the period. Now, according to the rule of three, if eight hundred and forty meals are to produce one hundred and forty-four ounces, how much must one meal produce? The answer, in decimals, is one hundred and seventy-one thousandths of an ounce, and a fraction over, or only a little more than *one and one half tenths* of an ounce at each meal.

You will then at once perceive how absurd it is for a woman to think that she must *cram* herself with food when she is pregnant, because of the notion that she has *two* to eat for instead of but one as at other times.

An intelligent and well-meaning lady of this city, Mrs. Pendleton, once put forth a work entitled, "Childbirth Made Easy." The theory of the book was given on the authority of some English writers; and the purport of it was, that in order to bear and bring forth a child as easily as possible, the mother should live principally on fruit, more particularly toward the close of the period of gestation. The more substantial forms of food, it was contended, went to make too much bone in the fetus, and hence, that if these were avoided, the bones would be smaller and softer, in which case the birth would be the

more easy. The work also recommended the water-treatment, and all other good rules of health.

I have no doubt that such a course of dieting in pregnancy would do a good deal toward mitigating not only the pains, but the dangers of the puerperal state.

The greatest of all dietetic enemies the world over is *excess in quantity.* You see, then, how admirably this theory would work in practice, although it might be false in real fact.

At any rate, you cannot be too careful of your diet when you are pregnant. There is no period of your lives in which it is more necessary to guard against all error than in this; and excessive alimentation, as I before remarked, is the greatest of all dietetic mistakes. It was one of Jefferson's great canons of life, that we never repent of having eaten too little. So I will say after him, that I never knew a pregnant woman to suffer from taking too small an amount of nutriment, but I have known many to suffer from eating too much.

I have elsewhere remarked, that the period of pregnancy is necessarily attended by a greater liability to febrile and inflammatory disease than is ordinarily the case. Every one knows—that is, every one who knows any thing at all about the subject—that flesh-meat is more heating and feverish in its tendency than the farinacea and fruits. Mark, then, the evidence of the wisdom and benevolence of the Creator, in taking away, for the most part, your appetite for animal food when you are pregnant. You are more liable to disease at this time than you are at others; and when disease does lay hold, it is more apt to go hard with you. God in His mercy then says, "I will take away the woman's appetite for flesh when she is pregnant;

yea, I will give her nausea, and loathing, and vomiting, for her heart is prone to lead her to excess."

Do not then, I warn you, eat animal food at this time, even if you should have some appetite for it, as is sometimes the case.

Observe, also, how very sumptuously you *may* live in the vegetarian way. Indian mush; rye mush; rye and Indian bread; rye bread; corn bread, or Johnny-cake, as it is called in many parts; hominy; cracked wheat; wheaten mush; peas; beans; pumpkins; squashes; melons; apples, green, dried, or otherwise, with a little of milk and eggs, if need be, a little sweet; and a great many other things, which I need not now mention, which you can have according to the season. How well we could live, all of us, if we but would, without causing the farmers to wring the chickens' necks off, to beat out the brains of the faithful ox and the affectionate cow with an axe, or to cut off the head of the innocent lamb. Do you ever think of these things when you eat *meat?*

What would you think of a woman who would eat pork meat and pork grease in pregnancy? You have heard a great deal of scrofula—that dreadful disease. In the long catalogue of maladies to which the human body is subject, there is not one more fearful, more dreadful than this. Scrofula is the swine's disease; and the word is from the Latin *scrofa*, which means a sow. The swine is, probably, of all living creatures, the most subject to it. Think, then, of a woman's eating such food when she is performing so important an office in God's government as that of nourishing within her own body a living child. How much pain, disease, and suffering may she cause by her improper conduct at this time; or, on the other hand, how much

happiness and physiological well-being, if she pursues a proper course. "Wisdom's ways are ways of pleasantness" to her also as to her child.

If it were not wandering to much from the tenor of my subject, I might speak of the *cheapness* of living on vegetable food.

In this country of abundance we do not often see much misery arising from want of sustenance. Still such things do happen, and now and then in almost every part. True, our charities are munificent, our country fertile, our people industrious, and on the whole, benevolent; yet, there is always room for charity to work in. If we cannot find an object at home, assuredly we can somewhere; and we ought never to be satisfied with our course of self-denial, so long as there is one hungry mouth more in the wide world to fill. I have often thought of these things, I admit, when I have been eating things which I ought not to have eaten. I presume you have done the same thing all of you, for the human heart is as prone to evil as the sparks are to fly upward, or a stone to fall to the ground.

If I could speak a word to a husband through you, on this important matter of diet in pregnancy, I would say to him, "Do not, as you love your wife, tempt her to any excess while she is pregnant. Remember how you loved her when she consented to give you that which was of incomparably more importance to you than the whole world besides, her own faithful, loving heart. Remember, too, how much she is made to suffer on your account. You can aid her by your example, and by your sympathy you can uphold her; but the pains, the agonies, and the perils of childbirth, these all are inevitably hers. I say, therefore, set your wife a good example yourself. If you do

not thus aid her, as surely as God liveth will you be made to suffer for your evil deeds.

If you should think that I have, in the course of these letters, harped too much upon the subject of diet, I must ask your indulgence. The importance of the topic, I am sure you will admit; but as to my method of treating it, that is another thing. If you consider that I have made a mistake, that I have taken up too much of your time with that which you, perhaps, already understand, I hope you will set it down against me only as a mistake of the head, and not one of the heart, as the theologians say.

THE DRINK.

It has been a serious question with some, whether man is at all *naturally* a drinking animal.

Whatever may be the truth in regard to this question, we all know that man does drink, and that a good deal, and too often of things which he ought never to take.

It is admitted, however, that if a person subsists wholly or principally on farinaceous food and fruits, and avoids stimulants of every kind, and all other excesses, leading throughout a regular, sober, and temperate life, he will seldom experience the sensation of thirst, and would then, consequently, not naturally drink. True, water is one of the most important of all life agents—one which will keep an animal alive more than twice as long as he could exist without it; and notwithstanding the fact that the living body is composed of nearly nine tenths of this *element*, still, under the circumstances which I have supposed, we do not wish to drink because our natural thirst is answered

by the pure water that is contained in the food and the fruits we use.

This, then, I consider the better plan: live in a manner so healthful, so temperate that you will need little drink of any kind.

But if you do at any time need fluid internally, why not act in accordance with all experience, all good judgment, all reason, and adhere to the one best of all drinks?

See how the fever patient takes to water; how the animal, and the vermin that have been poisoned with arsenic. See, too, the faithful cow, the horse, and the ox, how they satisfy themselves with this best and most abundant of all beverages when the hot sun comes down upon them.

I wish that you could all have pure, soft water, both to drink and to cook with; but you cannot, and then you must do the best you can. However, if you will leave off all useless, and worse than useless expenses in your living, you can soon make a cistern and a filter which will give you an abundance of the best of water—that from the clouds. A very little expense and trouble will also serve to construct an ice-house, so that you can have luxury and health combined, although I wish you to remember that ice should be used sparingly, especially if you should become very much heated and fatigued.

When I sat down to write this evening, I thought I should say something on the properties and effects of those almost universally-used articles, tea and coffee. This much I do say, however, you who are pregnant—you who are nursing, and, indeed, all and every one, do as I for these twelve years have done, ESCHEW THEM ALTOGETHER. They are pernicious in a great many respects. Besides this, I advise you to get my worthy friend Dr. Alcott's excellent work

on TEA and COFFEE. If you will but read that, I think you will conclude that it is a great deal better to do as I have done.

Thanks to Father Mathew, and the noble cause of temperance, there is little need of saying much now concerning the evils of tippling, which women were some years ago in the habit of when Dr. Dewees wrote, and against which he said so much. I need not say to you at this late day, that it is a great deal better for you to leave off alcohol in all its forms, and particularly during the period of which we have been speaking.

LETTER XII

DISORDERS OF PREGNANCY.

Nausea and Vomiting—Means of Prevention, and Cure.

THERE are a variety of physiological troubles that are connected with pregnancy. True, women do not all experience these, any or all of them; but inasmuch as you are liable to these affections, it is my duty to speak of them. In doing so, I shall class all of these abnormal symptoms under the general head of "disorders," because I believe that in a truly natural, or, in other words, healthful state of the system, none of these ailments would be experienced.

Nausea and vomiting, as most of you know, and not a few of you by experience—are, in the present state of society, frequent attendants of pregnancy.

These symptoms occur, for the most part, during the earlier months of gestation. They may, however, continue through the whole period, and in some cases they cease and then return again toward the latter part of it.

Most frequently morning-sickness commences from two to three weeks after the beginning of pregnancy. It may, however, come on the very day of, or next after conception, and some women have been able to discover this circumstance by the occurrence of the vomiting which follows it.

This sickness of the stomach is most apt to occur in the morning. Hence it has been called "morning-sickness," from the fact that it is most apt to take place at this period of the day. This is in part, doubtless, owing to the circumstance of the woman's getting up at this time, and not to any thing necessarily connected with that part of the twenty-four hours. If she reclines, the sickness leaves her for the most part, but again appears if she attempts to rise.

The matter thrown up from the stomach varies in character in different cases. Much here depends upon the dietetic habits of the individual and the state of the health. It is more commonly a sort of tough, sour mucus; but sometimes there is vomited an extremely acid, thin water, which in some cases is strong enough to excoriate the mouth and set the teeth on edge. Sometimes, too, bile is thrown up with the other matters.

The appetite is apt to become very variable in these cases; often, indeed, there appears to be none at all; at other times the most singular and even disgusting articles are craved for, and not unfrequently that kind of food which we would suppose the worst for the patient proves to be the best, that is, so far as retaining it on the stomach is concerned.

It may appear a strange doctrine to you, that in general those who suffer from nausea, vomiting, and the other more common accompaniments of pregnancy, get along better than those who experience none of these symptoms. "If vomiting should not be violent, and occur only in the early part of the day, though very troublesome," observes Dr. Denman, "it is so far from being detrimental, that it is generally found to be serviceable, by exciting a more vigor-

ous action of the uterus, and by bringing the stomach into a better state."

Some have been afraid that vomiting would cause abortion; and such an occurrence might happen, if this symptom were brought on in a violent manner, as by the administration of powerful drugs. But the vomiting which comes on in consequence of the stomach-sickness, instead of causing premature delivery, appears to be a safeguard against such an occurrence. In other words, those who experience nausea and vomiting, are not so liable to miscarry as those who have none of these symptoms.

If we could but take into our minds the whole scope of nature, and if we were able to trace, like the Infinite Mind, causes and effects, we should, doubtless, much oftener than we now are, be struck with the evident goodness of the Creator, even in the physical sufferings which He has made it our lot to endure. What is the office of nausea and vomiting in these cases? It is possible, under bad management, for these symptoms to become actually alarming in their extent. But what, it is well for us to inquire, is the design of these occurrences, so common during the period of gestation? Plainly, to restrain the woman from the gratification of a voracious and wayward appetite, the indulgence of which could but be of material detriment to both mother and child.

How is it in sea-sickness? Do we not find that people who go to sea are generally benefited in health thereby, and that none are so much benefited as those who are made sick? And how are they thus benefited? I answer, by the abstinence and fasting which they are compelled to practice. Almost all persons—all, I will say—have more or less of impurity in their bodies, so badly have we treat-

ed ourselves, and so badly do we live. Hence it is that in sea-sickness, and in the vomiting that occurs in pregnancy, benefit is received; the body is made to purify itself by its own inherent power.

If every pregnant woman could have nausea enough, no doctor would ever think of bleeding her; it would prevent all that plethora and fullness of the system which, under such circumstances, have led good and honest men, as well as women, to believe it is often best to abstract blood.

But you ask me, are these symptoms really natural, and intrinsically best for the system in pregnancy? I answer, they are not. I believe it possible so to live that a woman pregnant need not have them any more than any one else. In sea-sickness how is it? The sailors—they who are kept up regularly in the open air every four hours at farthest—never have it to any extent worth speaking of. The first time they go to sea they are apt to be sick, like other people; but in a day or two it is all gone—they work it off.

So, too, in the sickness of pregnancy. We never hear of the Indian women having it. They, likewise, are active in their habits, live plainly, and go often into the open air.

One of the most important things to observe in these cases is, not to eat too much, or at wrong times. A great many patients of this kind make sad work with themselves by eating all sorts of things for which they have a relish, and at all hours of the day, just as the fit happens to take them. We know full well how important it is to eat regularly when we are in health. How much more so, then, must it be when we are ill! If you have nausea, or if you have not, but no appetite, drink some pure cold water, and wait; the appetite will come.

It is really surprising to see on how small a portion of food a patient can subsist for many days.

The laboring classes—those who are compelled to work hard, whether they would or not, and who are obliged, in consequence of the iron hand of poverty being upon them, to live on plain, homely fare—they are not troubled with nausea and vomiting, as the idlers and the luxurious are.

You will naturally expect me to speak of the professional treatment for these troubles; and in regard to this, I remark, there are a great many things to be taken into the account. You cannot well know too much in regard to all the means of improving the general health.

The nausea is the most distressing part of morning-sickness, as it also is of sea-sickness. In the former, as in the latter, it is one of the most comforting things that can be done—the *most* comforting, rather—to take a good draught of pure, soft water, at about the blood temperature. If enough is taken it causes vomiting, which at once brings relief; but if the stomach should not thus be excited to an inverted action, the water will yet do good, as it tends to "settle the stomach," and this of itself brings a good deal of relief, although not so much as actual vomiting would do.

Some may tell you that vomiting is dangerous in pregnancy—that it is liable to cause abortion. So it is, as I have before said, if it is rendered very violent by the giving of powerful drugs. But any thing like a reasonable emetic, even of the drug kind, is comparatively safe in this respect; so much so, that the most experienced and most honest physicians are not now afraid to vomit a pregnant patient, if they consider it important to resort to that measure. Emetics of the drug kind have even been

used, and apparently with good success, as a cure of the nausea of which I have been speaking.

But do not understand me as recommending vomiting, even by water, the best and mildest of all emetics, except in cases of urgency, and when it can be made to take place without great straining or effort. As a general thing it is far better to fast.

I do not know of any thing in which physicians have been more puzzled than in the treatment of these symptoms. They have left nothing in the *materia medica* untried. The result is, however, that no plan has yet been fixed upon as being a legitimate one, or one that can be depended upon with any tolerable chance of success. Patients have sometimes died of the exhaustion caused by the vomiting, as has been supposed; but I am more inclined to think they have far oftener been drugged to death. It is mostly in the hospitals that these deaths have occurred, and there, as you know, there is great temptation for experimenting. Young physicians are there allowed to make experiments; and there the older ones are also too much tempted to do as they would not wish to be done by.

Physicians have been so much thwarted in these cases, that they have often recommended bringing on premature delivery, fearing that the patient would be destroyed if they did not resort to this dreadful expedient. Most of them, I have no doubt, have acted honestly in these dreadful emergencies. It is to their credit that they seldom, if ever, have resorted to premature delivery without first having counsel on the subject.

I have already hinted that exercise and activity are great helps in keeping off those troubles that so often occur with

the pregnant. I would repeat, BE ACTIVE. Do not let a day, a half day, nor even an hour pass over without your doing something. BE ACTIVE, REGULARLY, HABITUALLY ACTIVE. Let this be your motto, and your practice, too.

I must tell you also that water-treatment is a most useful help. Take the rubbing wet-sheet when you feel so badly, and see how great a change it will work. Wear the wet girdle, and take the cold hip-bath, not too long at a time, if necessary. I do not know that I can recommend eating ice, as some have done; yet it has sometimes appeared to act very favorably, and great quantities have been used by some in this way, without any apparent harm.

The cold water injections are much to be recommended in cases of costiveness, which often occurs in connection with the vomiting.

LETTER XIII.

DISORDERS OF PREGNANCY.

Fainting—Its Causes—Symptoms—Results—Treatment.

Fainting sometimes happens in pregnancy, even with those who are not subject to it at other times. It is more apt to occur at or about the time of quickening. Some persons are very subject to it, from very slight causes, during the whole period of pregnancy; others experience it only occasionally; and some have it repeatedly, and some periodically. It is more commonly the weakly and delicate who are thus attacked; but some healthy females are subject to it. It happens with some every month periodically, with others every week, and in some cases every two or three days, or even oftener.

Causes.—Fainting in pregnancy is often excited by the first movements of the child, even while they are weak, and by subsequent ones when strong. It is sometimes a consequence of palpitation, or derangement of the heart's action and of the circulation. Too great exercise of either mind or body, want of exercise and employment, violent mental emotions, running too quickly up stairs, want of sleep, offensive sights and odors, overeating, and too great heat in the apartment—each of these may bring on fainting in pregnancy. Dr. Campbell observes, "As in the gravid (pregnant) state, fainting seizes individuals so suddenly,

and that, too, while they are in perfect health, it is difficult, more especially in the early months, to account for it, since the uterus at this period cannot, from its bulk, produce any interruption or irregularity in the circulation of the heart or larger vessels. The womb, however, may influence the heart in another, viz., through the medium of the nerves, whereby irregularity of its action, as often happens from a similar cause on other occasions, is produced; this inordinate action may lead to some irregular distribution of the blood in the cerebral vessels, and hence fainting."

Symptoms.—The patient experiences a feeeling of lan gour, weariness, and weakness, and there is a frequent inclination to yawn or sigh; the sight becomes dim; surrounding objects appear to turn round; specks float before the eyes; there is a ringing or buzzing in the ears; the face becomes pale, and thus the patient becomes faint and insensible. The premonitory symptoms, if any appear, are sometimes so rapid in their course, that the patient is unable to call attention to them.

During the fit there is no pulsation at the wrists; the heart beats but faintly; breathing is nearly suspended; the muscles lose their power, and a cold sweat breaks out over the surface. But there is no convulsive motions of the limbs, nor any frothing at the mouth, in a case of simple fainting.

This condition of things may last only a few minutes, or for several hours. When the fit begins to pass off, respiration becomes more distinct, the patient utters a few long-drawn sighs, the heart begins to act with more energy, the pulse at the wrist becomes more perceptible, some color appears in the face, and the consciousness is again

restored. In some cases consciousness is not entirely lost, and in some it is long before it is fully regained.

"There is a species of syncope," says Dr. Burns, "that I have oftener than once found to prove fatal in the early stage of pregnancy, dependent, I apprehend, on organic affections of the uterus; that viscus being enlarged, or otherwise diseased, though, perhaps, so slightly, as not previously to give rise to any troublesome, far less, pathognomonic symptoms. Although I have met with this fatal termination most frequently in the early stage, yet I have also seen it take place so late as the sixth month of pregnancy."

Cases of organic disease of the heart, however, are rare, so that you ought not to think, at every little fainting spell you may experience, that you have a disease of this organ. If in the syncope there is convulsive motion of the limbs, distortion of the features, and frothing at the mouth, it is only a hysterical spasm.

If fainting happens most toward the close of pregnancy, it is to be regarded with more suspicion, according to the opinions of some authors; not so much, however, for the immediate consequences, as for its effect upon the convalescence after parturition.

This symptom sometimes occurs in consequence of an internal hemorrhage, in which case it is generally never prolonged, accompanied with fullness and tension of the abdomen, dull pain and weight in the pelvic region, permanent blanching of the surface, and after a short time a discharge of blood from the vagina.

Results.—In fainting, the circulation becomes for the time almost suspended. When, therefore, we consider the dependence of the fetus upon the maternal circulation, we

cannot suppose that its frequent recurrence is wholly innocuous to the child. Occasional fits of syncope, however, appear to do no harm to the fetus; and yet it is always best to avoid the occurrence as much as possible. It has been known to cause abortion when it has been often repeated.

Treatment.—The patient should, during the fit, be placed in the most comfortable posture, the recumbent being the best, the head at the same time being laid rather low, and, if possible, where a current of cool or cold air can be made to blow over it, particularly upon the face; sprinkling cold water in the face, and washing and rubbing the face and hands in cold water are useful measures. In some cases it would be also advisable, or rather necessary, to wash and rub the whole surface.

A full injection of tepid water will aid materially in bringing about consciousness and circulation in these cases.

This water-treatment is incomparably better than that which is usually adopted, such as giving the patient wine, brandy, spirits, carbonate of ammonia, etc.

It generally happens that people themselves, without the aid of the physician, have to manage cases of syncope. This they can readily enough do as a general thing; but if it should prove at all persistent or troublesome, they should lose no time in getting the best medical advice they can obtain.

Prevention.—Every thing should be done that may be to restore the general health. Oftener by far than otherwise, fainting is purely a symptom of debility. This fact of itself suggests the measures that should be adopted in order to ward off the attacks.

LETTER XIV.

DISORDERS OF PREGNANCY.

Abortion—Its Nature and Ill Effects—Its Causes—Means of Prevention.

Abortions are evidently not in the order of nature. We see in the animal kingdom that, as a general fact, gestation everywhere goes on to its full and normal period; that abortions are very rarely indeed seen; but when we come to consider the animal man, we find a different state of things. With man, and man only, abortions are frequent.

Certain classes of females are more subject to abortion than others. Fleshy or excessively fat women, and those who experience excessive menstruation; those who are hysterical, nervous, irritable, or excessively sensitive; those who have a very fair complexion, and are rickety, scrofulous, or have any other taint of the general system; those who have dropsy, or are affected with cancers; those who drink tea and coffee freely, and eat habitually highly concentrated and stimulating food; those who live a life of excitement, frequenting balls, parties, and theaters late at night; those who are in the habit of much novel reading, and perhaps, above all, those who, in connection with their sensual and worse than brutish husbands, abuse the marital privileges, are most apt to abortion. If husbands have any regard for the physical welfare of either their wives or offspring, or even their own health, let them re-

frain from all sexual indulgences during the period of the wife's pregnancy. Dr. Edward Baynard, a quaint but able English writer, one hundred and fifty years ago, in speaking of the evil effects of swathing and dressing infants too tightly, indulged in the following reflections: "'Tis a great shame that greater care is not taken in so weighty an affair, as is the birth and breeding of that noble creature, man; and, considering this stupid and supine negligence, I have often wondered that there are so many men as there are in the world; for what by abortions, too often caused by the unseasonable, too frequent, and boisterous drunken addresses of the husband to the wife, when young with child, and her high feeding, spiced meats, soups, and sauces, which, with strait lacings, dancings, and the like, one full half of the men begotten are destroyed in the shell, squabbed in the nest, murdered in embryo, and never see light; and half of the other half are overlaid, poisoned by ill food, and killed at nurse," etc.

Terror, fright, and excessive fatigue, also, not unfrequently cause abortion. All unpleasant sights, and all undue mental excitements, should be, as far as possible, avoided by those who are pregnant.

There are vile books in circulation, sold too, sometimes, by highly respectable booksellers, in which the writers affirm that abortion can be produced *without any harm to the constitution.* There is one physician in this city, whose book we saw a few days since in a bookstore in the city of Boston, in which he proposes to effect abortion with perfect safety; but, for the package of medicine, a fee of *ten* dollars must be sent, of course, in advance. It may be of service to some who may peruse these pages, for me to inform them, that there is always great danger in caus-

ing the expulsion of the fetus. The most powerful medicines for this purpose are often known to fail. Gastritis, enteritis, peritonitis, and death itself, has been caused by medication, without causing the intended abortion. And in those cases where the desired object is by chance brought about, sad is it to think, what for years must be the health. Even life-long misery and suffering have often been caused by drugging the system to produce abortion.

You have read those lines of Ovid, which Dryden gives us:

"But righteous vengeance of their crimes pursues,
And they are lost themselves who would their children lose,
The poisonous drugs, with mortal juices fill
Their veins, and undesigned themselves they kill.
Themselves upon the bier are breathless borne
With hair tied up, which was in ringlets worn."

Women cannot be too careful of their bodily health during the period of pregnancy. If they would avoid, among a multitude of evils, the great misfortune of abortion, they cannot be too vigilant, and watchful, and careful in all matters pertaining to health at this time. Any imprudence here, such as would scarcely be noticed at other times, may lay the foundation for much future suffering.

I am here led to remark, that *too much* labor and exercise, as well as idleness and habits of effeminacy generally, in this hard-working country of ours, not unfrequently cause this evil. Lazy people do habitually too little; industrious people often too much.

It appears that abortions are becoming more and more frequent in this country at the present day. It is notorious that the habits of Americans are not now as

simple as they formerly were. More tea and coffee are drank, more rich and stimulating food is used, and there is a vast deal more idleness withal. Formerly labor was more dignified, more respected; but labor now is degrading. It is not *fashionable* to spin, weave, knit, sew, wash, and to make bread, as in the good days of our grandmothers. People are everywhere growing more indolent. "The sluggard will not plow by reason of the cold; he shall, therefore, beg in harvest, and have nothing." So, also, those who will not employ the limbs and muscles which God has given them for use, cannot have permanent and enduring health at any price.

But it is asked, Would you pay all attention to physical culture, and neglect the mental? I answer, no. I would have my daughters taught music, painting, drawing, as well as science generally, but on no account would I do this at the expense of bodily health. Nor is there any need of this; the highest possible cultivation of the mental manifestations can only be accomplished when the physical powers are suitably and proportionably developed to their fullest extent. "A sound mind in a sound body, is nature's inevitable law." There is yet one evil pertaining to the subject of abortion, an increasing one too, in some parts of our country at least, of which I should speak.

Abortion, it will thus be seen, is a serious evil. Its consequences may, in general terms, be condensed as follows:

1. A stronger tendency to a recurrence of the evil. Those who miscarry once are much more apt to do so again.

2. Menorrhagia, or an immoderate flow of the menses.

3. Irregularity of the monthly periods; these occurring either too often or too seldom, and attended with much prostration of the general health.

4. Dysmenorrhea, or painful, laborious menstruation, accompanied often with more pain and suffering than attend labor itself.

5. Hysteria, or hysterics, depression of spirits, disquietude, dissatisfaction with life, its pursuits, pleasures, and enjoyments, and an habitual melancholic state of mind.

6. Dyspepsia, with all its train of pains and penalties. This picture, terrible as it may appear, is no imaginary one. Every well-informed physician will at once recognize the truth of all that has been affirmed. It is a bad state of the system which allows of abortion. One abortion ordinarily is far more trying and worse upon the constitution, than two labors at full term.

Means of Prevention.—In speaking of the evils of abortion, the means of preventing such an occurrence have necessarily been hinted at. There are yet other things, however, which should be referred to on this subject.

It will naturally suggest itself to every reflecting mind, that the great object to be attained in regard to the prevention of abortion, is a thorough, habitual, and permanent cultivation of the physical powers. Invigorate the general system to its fullest extent; accomplish this, not only for a single time, but, as it were, perpetually, by daily and never-ceasing effort. Is not health the greatest of all earthly blessings? How, then, in order to secure it, can we do or sacrifice too much?

In reference to the prevention of abortion, let the following particulars be observed:

1. *The use of cold water.* In all cases of abortion there

is too great laxity of the system; there is a want of tonicity, so to say; the fibers are, as it were, unstrung. Cold bathing, for its tonic, constringing, and invigorating effect, has for centuries been recommended as a most valuable means of preventing this evil. In pregnancy, the same general principles should be observed in fortifying and invigorating the general health as at other times. No violence should be done to the system. A general bath in the morning, cool or cold, according to the individual's strength; a hip or sitz bath of five or ten minutes' duration, two or three times during the day, and an ablution with water, not too cold, on going to rest, will ordinarily be sufficient for the daily routine of treatment in those cases where there is tendency to abortion; such a course is, in fact, good at all times. The wet girdle, elsewhere explained, will often be of advantage; but to make it a tonic or strengthening application, as it should always be under these circumstances, great care must be taken that it does not become too warm. This is very apt to be the case in hot weather. It must then be changed often and rewet. If it becomes too hot, it weakens the system instead of strengthening it, thus tending to cause the very difficulty it is intended to prevent. "Injecting cold water into the vagina twice or thrice a day," says Dr. Burns, in his work on midwifery, "has often a good effect, at the same time that we continue the shower-bath." And this writer also observes, "that when there is much aching pain in the back, it is of service to apply cloths to it, dipped in cold water, or gently to dash cold water on it, or employ a partial shower-bath, by means of a small watering can." Water, let it be remembered, is the greatest of all tonics to the living system.

2. *Feather beds and overheated rooms.* These have much to do in causing abortions. People ought never to sleep on a feather bed, unless, possibly, very old and feeble persons, who have long been accustomed to them. In such cases it might not always be safe to make a change in cold weather suddenly. But for a pregnant woman to sleep on a feather bed is one of the worst of practices. And here also I must mention that feather pillows, as well as feather beds, do a great amount of harm. Even those who have emancipated themselves from the evils of feather beds usually retain the feather pillow. It is a wise old maxim, "to keep the head cool." The head has blood enough, more than any other part of the system, to keep it warm. No person, not even the youngest infant, should ever sleep on a bed or pillow made of feathers. The animal effluvia coming from them is bad, and the too great amount of heat retained about the surface debilitates the system in every respect.

3. *Undue mental excitements.* Let those who are pregnant avoid theaters, balls, and parties late at night, all highly excitable public meetings, whether literary, political, or religious, and all undue mental and moral excitements of whatever kind. In no situation is it more necessary for a human being to maintain a pleasant, consistent, and equable frame of mind, and good and permanent health of body, than in pregnancy.

4. *Sexual indulgences.* The more strictly chaste and free from sexual indulgences, the better for the woman during pregnancy.

5. *Recurrence of abortion.* Every succeeding miscarriage is more apt to be followed by a recurrence of the evil; the body, as it were, like the mind, is capable of

getting into bad habits. Those who have abortion oftenest are most liable to their recurrence; and every attack is more apt to be worse than the preceding one.

6. *General health.* Abortion always indicates a bad state of the system generally. A person of really good health could scarcely have abortion. Possibly fright, unpleasant occurrences, or accidents, might cause such a result. Abortion always injures the general health. Labor at full term is natural, and is therefore attended with less danger. Abortions are unnatural.

7. *Vegetable diet.* This was observed by the celebrated Dr. Cheyne, of England, to have a great influence in preventing abortion; milk, however, which is in some sense a form of animal food, was generally used. A total milk and seed diet, as Dr. Cheyne terms it, was a most excellent means of preventing unfertility and abortion.

8. *Tea, coffee, and spices.* All stimulants, that is, articles which do not go to nourish the system, such as tea, coffee, tobacco, wine, porter, spirits, and the like, should be strictly avoided. All stimulation of the system is followed, necessarily, by commensurate depression. A person takes a stimulant, and feels better for the time. In the same proportion as the stimulation will be the consequent depression. The more a stimulant is used, the more necessity will there be to keep up the habit; and the more the habit is followed, the weaker does the system become. Thus in pregnancy, by the use of stimulation, the system becomes more liable to abortion.

9. *Exercise.* More than one hundred years ago, the celebrated Dr. Cheyne remarked, concerning abortion and its causes, as follows: "It is a vulgar error to confine tender-breeding women to their chambers, couches, or beds,

during all the time of their pregnancy. This is one of the readiest ways to make them miscarry. It is like the common advice of some unskillful persons to such as have anasarcous or dropsical legs; namely, to keep them up in chairs, on a level with their seats, which is the ready way to throw up the humors into their bowels, and fix them there. The only solid and certain way to prevent miscarriage, is to pursue all those means and methods that are the likeliest to procure or promote good health, of which air and gentle exercise are one of the principal. All violence or excesses of every kind are to be carefully avoided by the parturient; but fresh air, gentle exercise, walking, being carried in a sedan or chaise on even ground, is as necessary as food or rest, and therefore is never to be omitted, when the season will permit, by tender breeders."

In my next letter I shall speak in detail concerning the special treatment that should be adopted in these cases.

LETTER XV.

DISORDERS OF PREGNANCY.

The Evils of Abortion—The great Danger of bringing it on purposely—Cases—Illustrations of the Methods of Cure—Uterine Hemorrhage—Cases of Cure.

In the summer of 1849, walking down the Bowery, in the city of New York, I fell in company with a lady whom I had attended in childbirth, some three years previously. She was of middling stature, and I should judge twenty-five or six years of age. She said she had been for some time desiring to speak to me concerning her health. Since the birth of her last child she had a number of times experienced abortion, at three or four months from the commencement of pregnancy. She could not understand why it should be so; she was tolerably careful in diet, and bathed, to some extent, daily. She was, perhaps, in her husband's store too much of the time, standing upon her feet, waiting upon customers, etc. Formerly she was a great walker, and could endure a good deal of fatigue, but latterly she was becoming less and less able to take long walks. She soon became fatigued, whereas, formerly, she could go to almost any extent in pedestrian exercise. The question was, how to avoid these abortions and their ill consequences. I gave her advice concerning diet, bathing, exercise, etc., and the next day wrote her husband substantially as follows:

"Dear Sir—Your very worthy wife inquired of me yesterday what she should do in reference to preventing abortions, to which she is of late growing subject. I advised her the following treatment:

"1. Perform thorough ablution on rising in the morning. Drink some water, and walk in the open air, but not so much as to induce great fatigue. Housework is very good, but going into the open air, an hour or thereabout before dinner, will be better.

"2. Take the rubbing wet-sheet, and after it the sitting-bath ten minutes. Take also some kind of exercise before and after this bath.

"3. In the afternoon practice the same thing as in the forenoon.

"4. The rubbing wet-sheet on going to rest.

"5. It is very important that due attention be paid to diet. She should eat no meat, butter, and as little sweet as possible. Rice, brown bread, Indian mush, hominy or samp, potatoes, good fruits, and milk—these are the best articles for her.

"6. In addition to the above advice which I gave to your wife, there is a very important matter to be observed. Do you not practice too frequent cohabitation with her? This is, perhaps, of all, the most prominent among the causes of abortion. Taking a survey of the animal kingdom, we observe it to be a law, that animals do not cohabit during the period of pregnancy.

"Knowing that you are a kind and good-hearted husband, and desire the best good of your wife, I take the liberty of submitting to you the following rules, which, I am confident, you will agree with me will be safe:

"1. Always sleep separately for six months at least,

and twelve would be better. By that time we have every reason to believe your wife will enjoy her natural health.

"2. Suppose that after these six or twelve months, pregnancy again occurs, sleep then again separately during the entire period, and at the same time let your wife follow a similar course in water, diet, exercise, etc., to that I have above recommended.

"Then will she be able to prevent those disastrous consequences of frequent abortion."

Case II.—In the spring of 1845, I was called upon by a gentleman and his lady for advice in regard to herself, she being then at about the middle of the term of pregnancy. She was threatened, as she believed, frequently with abortion. The year previously she had had a bad miscarriage, which was occasioned by a fall. She was of scrofulous habit of body, and had borne already seven or eight children, a number of whom had died.

I directed the patient to practice general ablution two or three times daily, with hip-baths of short duration, to exercise in the open air, and ride frequently, according as she could bear; but to be careful never to do too much at a time. A little overdoing would be liable to cause the difficulty with which she was threatened. The strictest care in diet I strongly advised her to observe.

She went on faithfully in the fulfillment of these directions, and about the end of the month of August, in exceedingly hot weather, she gave birth to her child. She followed the water-treatment resolutely, according to my directions, and in ten days was able to enjoy very long walks in the city. Twice she has been pregnant since that time; and at the time of writing this, has gone to

the eighth month without experiencing any symptoms of abortion.

I should remark, this lady had frequently had miscarriages before the one above referred to.

Case III.—A very small, delicate, young woman, of this city, being about seven months advanced in pregnancy, went to an evening party, at which she danced. Being very fond of that exercise, she, no doubt, overdid the matter. Indeed, dancing at all in that condition is rather a hazardous experiment. Abortion came on, attended with a great deal of prostration. Water-treatment was practiced in this case, and she recovered as well as could be expected. She felt very sad at thus having lost her child, and resolved for the future to do better. Since that she has succeeded in bringing forth a tolerably healthy offspring.

Case IV.—I knew, some years since, a young married lady, in the city of Boston, who was much addicted to novel reading, and going to balls, theaters, parties, etc., at night. She walked a long way one very hot, sultry night in midsummer, and became overheated and fatigued. On arriving home she commenced bleeding, which became so severe that before a physician could be obtained she fainted many times, and apparently came very near losing her life.

Case V.—I recollect a case which occurred some years ago—one, indeed, which I shall not soon forget, because of the fatigue and anxiety it caused me. A gentleman came after me in the night time, telling me that his wife was bleeding, and had already bled to such an extent that he believed she would be dead before I could get to her. On arriving at the house, I found she had fainted many

times, and that she had bled enormously, and even then there was no amendment of the symptoms. I do not know that I ever saw a person apparently so near death from hemorrhage as this lady, and yet recover. I had to remain with her almost constantly for two days and nights, before she appeared to be at all safe.

Years afterward, this lady gave me the following information respecting the cause of that frightful abortion:

Suspecting that she had become pregnant, and much against her inclination at the time, she resolved upon procuring an abortion. Pregnancy, she said, at that time would interfere very much with her comfort, arrangements, etc. She consulted a lady-clairvoyant in reference to the matter. The clairvoyant could not even tell her whether pregnancy existed or not; but to make safe in the matter, she ordered some vegetable teas to be drank in large quantities, which she said would expel the fetus, if one existed. She thus went on for some time. Her general health became deranged by the dosing, and yet no abortion was procured. Afterward, more powerful medicines were directed by the clairvoyant. These she found were at length making great mischief with her health; her stomach became very much deranged, and a regular tertian intermittent set in, yet no abortion came on.

At length, one day her children fell down stairs. Hearing them, she ran down two flights with the greatest precipitation, and as if she were in no sense delicate in health. This, together with the fright she experienced, prostrated her system very much, caused a great trembling to come over her, which soon resulted in the miscarriage I have referred to.

It was a long time—many months—before this patient

recovered any thing like her former health. She was low-spirited, dull, inactive, and could take no comfort of life.

Case VI.—Two years after this the same lady was again pregnant. One day she did a very large washing, together with other kinds of work, and became much exhausted. This, again, brought on miscarriage, attended with fearful bleeding as before. A resolute course of treatment was practiced, and thus she was again rescued from danger; but such attacks are always worse than labor at full time.

Case VII.—While I have been writing and arranging these letters, I have been called to visit a lady who has been pregnant a few weeks the second time. Her first child has been somewhat ill from teething—in fact, a good deal sick for some days and nights, and taking care of him, bathing, dressing, applying the bandages, etc., to him, has made her quite weak. Two or three days ago, her husband was gone from home of an evening, and being a very punctual man in such matters, as all *good* husbands are, his wife expected him home early. He was, however, hindered beyond his time. This caused her a good deal of anxiety, although he had a friend with him. Soon after his return, bearing-down pains came on, and some discharge. Afterward she got better, and then in a day or two much worse. The mother-in-law gave her gin, the old-fashioned way to help on the courses, not believing, I suppose, that she was pregnant. But nature did better than the dosing; it would not let her abort. About this time I was sent for, whereupon I told her to keep pretty quiet, put on a heavy wet girdle, and change it as often as she felt bearing-down pain—every hour or two, at farthest. The cloth worn upon the genitals, under such circumstances, was also to be kept wet in cold water. But first of all,

she was to take a good washing by sitting before a fire in a wash-tub, with tepid water, but not quite warm. This gave her a good deal of relief. In the morning I found her quite well, and free from pain and discharge.

It is far from being my wish, by any of these letters, to fill your minds with unpleasant thoughts or ideas of horror. But it occurred to me that you were, perhaps, many of you not aware that there are vile persons in our great cities who make it a regular business to procure abortions. Now I need not repeat to you, that a practice so wicked and unnatural as this must necessarily be fraught with great danger.

I thought I would present you with the account of a case of this kind, given us by a celebrated professor of this city, Dr. G. S. Bedford. It is as follows:

"Mrs. M—— was the mother of two children, and had been suffering extremely, for the last fourteen hours, from strong expulsive pains, which, however, had not caused the slightest progress in the delivery. I was likewise informed, that about four hours before I saw the case, Dr. Miner, an experienced physician, had been sent for, and, after instituting a vaginal examination, remarked to the attending physicians, that, in all his practice, he had never met with a similar case. Dr. Miner suggested the administration of an anodyne, and having other professional engagements, left the house. Mrs. M—— was taken in labor Monday, December 18th, at 7 o'clock, P. M., and on Sunday, at 7 o'clock, P. M., I first saw her. Her pains were then almost constant, and such had been the severity of her suffering, that her cries for relief, as her medical attendants informed me, had attracted crowds of people

about the door. As soon as I entered her room, she exclaimed, 'For God's sake, doctor, cut me open, or I shall die; I never can be delivered without you cut me open!' I was struck with her language, especially as I had already been informed that she had previously borne two children.

"On assuring her that she was in a most perilous situation, and at the same time promising that we would do all in our power to rescue her, she voluntarily made the following confession:

"About six weeks after becoming pregnant, she called on one of these infamous female physicians, who, hearing her situation, gave her some powders, with directions for use. These powders, it appears, did not produce the desired effect. She returned again to this woman, and asked her if there were no other way to make her miscarry. 'Yes,' says this physician, 'I can probe you; but I must have my price for this operation!' 'What do you probe with?' 'A piece of whalebone.' 'Well,' observed the patient, 'I cannot afford to pay your price, and I will probe myself.' She returned home, and used the whalebone several times; it produced considerable pain, followed by a discharge of blood. The whole secret was now disclosed. Injuries inflicted on the mouth of the womb, by other violent attempts, had resulted in the circumstance as detailed above. It was evident, from the nature of this poor woman's sufferings, and the expulsive character of her pains, that prompt, artificial delivery was indicated. As the result of the case was doubtful, and it was important to have the concurrent testimony of other medical gentlemen, and as it embodied great professional interest, I requested my friends, Drs. Detmold, Washington, and Doane, to see it. They reached the house without delay,

and, after examining minutely into all the facts, it was agreed that a bi-lateral section of the mouth of the womb should be made.

"Accordingly, without loss of time, I performed the operation in the following manner: The patient was brought to the edge of the bed and placed upon her back. The index finger of my left hand was introduced into the vagina as far as the roughness, which I supposed to be the seat of the *os tincae*. Then a probe-pointed bistoury, the blade of which had been previously covered with a band of linen to within about four lines of its extremity, was carried along my finger, until the point reached the rough surface. I succeeded in introducing the point of the instrument into a very slight opening which I found in the center of this surface, and then made an incision on the right side. I then withdrew the instrument, and in about five minutes it was evident that the head of the child made progress. The mouth of the womb dilated almost immediately, and the contractions were of the most expulsive character. There seemed, however, to be some ground for apprehension, that the mouth of the uterus would not yield with sufficient readiness, and I made an incision of the posterior lip, through its center, extending the incision to within a line of the peritoneal cavity. In ten minutes from this time, Mrs. M—— was delivered of a strong, full-grown child, whose boisterous cries were heard with astonishment by the mother, and with sincere gratification by her medical friends. The expression of that woman's gratitude, in thus being preserved from what she and her friends supposed to be inevitable death, was an ample compensation for the anxiety experienced by those who were the humble instruments of affording her relief. This patient

recovered rapidly, and did not, during the whole of her convalescence, present one unpleasant symptom. It is now ten weeks since the operation, and she and her infant are in the enjoyment of excellent health.

"At my last visit to this patient, with Dr. Forry, she made some additional revelations, which I think should be given, not only to the profession but to the public, in order that it may be known, that in our very midst there is a monster who speculates with human life, with as much coolness as if she were engaged in a game of chance.

"This patient, with unaffected sincerity, and apparently ignorant of the moral turpitude of the act, stated most unequivocally to both Dr. Forry and myself, that this physician, on previous occasions, had caused her to miscarry five times, and that these miscarriages had, in every instance, been brought about by drugs administered by this trafficker in human life. The only case in which the medicines failed was the last pregnancy, when, at the suggestion of this physician, she probed herself, and induced the condition of things described, and which most seriously involved her own safety, as well as that of her child. In the course of conversation, this woman mentioned that she knew a great number of persons who were in the habit of applying to this physician for the purpose of miscarrying, and that she scarcely ever failed in affording the desired relief; and among others, she cited the case of a female residing in Houston Street, who was five months pregnant; this physician probed her, and she was delivered of a child, to use her own expression, 'THAT KICKED SEVERAL TIMES AFTER IT WAS PUT INTO THE BOWL.'"

Thus you have an exemplification of the danger of the wicked and fearful practice which I have spoken against.

If any of you are ever tempted under such circumstanes, beware!

UTERINE HEMORRHAGE.

As intimately connected with the subject of abortion, it is fit that I should here make a few remarks on that form of *uterine hemorrhage* which is not connected with child-birth.

Case I.—I recollect a case of this kind that occurred with a lady who was, I should think, at least sixty years of age. It was in the month of October, 1846, on a passage from New York to London, in the packet ship Switzerland, Captain E. Knight. The old lady and husband had taken a steerage passage from New York. They were English people, returning after many years' absence, again to visit their native country.

One day the old gentleman came on deck and told me his wife was very sick of uterine hemorrhage, and that he wished my advice. I told him I would prescribe what I considered to be the best course in such cases, but that I feared his wife would not be willing to follow it. Indeed, I had no idea that she would do so.

However, I gave the advice, which was substantially as follows: First, take old sail-cloth, which was clean, make some pieces into the shape of towels, and one larger, to be used in the form of a child's diaper; place these cloths, wet, about the abdomen and thighs, and let the patient wear a large one, wet, in the form of a child's diaper; let her take but little and very light nourishment for two or three days, and be careful and not move about too much; help her out upon deck, when the weather is fine, so that she may enjoy the invigorating effects of the pure air and

light. You need not chill her much with the wet cloths, but be exceedingly particular that they do not become too warm; let her wear them the larger portion of the time, until she becomes quite well.

Contrary to my expectations, the old lady followed the course resolutely, and in a very short time was again entirely well. She spoke in great praise of the invigorating effects of the cold cloths; she also drank cold water. We were at sea about three weeks after this, and the old lady's health continued good until we left the ship.

Case II.—A lady of about the same age, in the winter of 1848–49, living in Jersey City, experienced uterine hemorrhage. She had been overdoing in the way of work. A similar course to that in the above case was followed, and in a few days she also recovered. Rest, alone, in such cases—that is, abstaining from severe labor, and taking but very little exercise, such as can be easily borne, and without fatigue—is alone sufficient for the curing of many of these cases.

Cold hip-baths, of short duration, and often repeated, are always good in attacks of this kind. Indeed, the more coolness generally to the body, the better; but we should not chill the extremities too much—not that it is dangerous to do so, but it is better to avoid it.

In the treatment of hemorrhages, the Indians pursue a very rational mode of treatment. If a severe hemorrhage follow a wound, which is not unfrequently the case, they plunge themselves into cold water, thereby producing a constriction upon the bleeding vessels. We all know by experience the efficacy of cold to arrest bleeding at the nose. We put a piece of ice on the neck, pour cold water down the spine, or even put a cold door-key on the back

of the neck, and in most cases epistaxis ceases. All physicians and surgeons—all who at all deserve the name of such—know well the power of cold to arrest hemorrhages—often, too, such as are of the most alarming character. We should make very poor work indeed, in stopping hemorrhages, if we were deprived of cold water. Cold water is worth more—incomparably more for this purpose—than all other remedies under the firmament of heaven combined.

LETTER XVI.

DISORDERS OF PREGNANCY.

Its Febrile Condition—Acute Disease—Sleeplessness—Heart-burn—Constipation—Diarrhea—Piles and Hemorrhoids—Their Treatment.

It is said to have been an aphorism of Hippocrates, the father of medicine, who lived more than two thousand years ago, that pregnant women attacked with acute disease always die. This strong assertion cannot be said to hold good, certainly, at the present day; but yet pregnancy, it must be admitted, exercises, as a general fact, a very unfavorable influence on the system in acute disease. The danger here may be said to be three-fold. First, the system is already in a febrile condition, or one very nearly bordering thereto; second, there is the new disease; and third, this often causes the death of the unborn child, and then the dangers of abortion are superadded to the others. "The life of the child, too," say authors, "is endangered by the treatment necessary for the cure; especially in the use of harsh purgatives, violent emetics, salivation, and profuse bleedings." But thanks to a better day, we of the water practice are under no necessity of running such fearful risks. We have not only a more effectual way, but one, when managed by judicious hands, harmless and safe. "It is by the prompt use of mild means, and a persevering attention to small matters," judiciously observes

Dr. Maunsel, "that the patient is to be conducted through the dangers that encompass her." And he justly adds, "Above all, avoid the dreadful blunder of treating a woman for acute disease without discovering that she is pregnant."

Pregnancy, as I have remarked, is always attended with more or less excitement of the system, an excitement which bears some resemblance to a state of fever. There is also a greater proneness to fevers, even from slight causes, now than at other times. Hence the necessity of avoiding, as far as possible, all such causes; and hence also, the necessity of exercising the greatest care in regard to diet and drinks. Too much food, and that which is too exciting, will cause more harm in pregnancy than at other times, from the greater tendency to fever. The common belief among women is, that more food is needed during pregnancy than at other times, because the food goes to furnish nourishment for two instead of one, that is, for the mother and the child within her. "It is therefore," says Dr. Dewees, "constantly recommended to eat and drink heartily; and this she too often does, until the system is goaded to fever; and sometimes to more sudden and greater evils, as convulsions or apoplexy."

If, instead of full diet, women in pregnancy will but try the plan of eating less food, even of becoming very abstemious, they will most assuredly find that they get along better, suffer less from plethora or fullness, and enjoy greater comfort of body in every respect.

SLEEPLESSNESS.

This, in a greater or less degree, not unfrequently occurs during pregnancy. It is most apt to occur during the

later months of the period. Within a few days of the birth, however, better rest is experienced, and a greater degree of comfort in every respect. This tendency to sleeplessness during pregnancy is sometimes so troublesome as almost wholly to prevent sleep. "The limbs are agitated by involuntary contractions of the muscles, which, by the frequency and suddenness of their motion, instantly interrupt the sleep to which the woman was at the moment strongly inclined."

"Sleeplessness," says Dr. Maunsel, "most frequently affects the weak, nervous, and irritable, occurring sometimes early in pregnancy, oftener toward the end of the term. If the want of sleep continue for many days, it is commonly followed by very grave symptoms, as restlessness, fever, mental disturbance, convulsions, etc.; abortion has resulted from it, and some cases have terminated in insanity; others have destroyed life." But those who follow a judicious course of water-treatment do not become thus afflicted. If such occurrences should be at all possible in the new modes, the cases would be exceedingly rare. I have known many persons to follow bathing during pregnancy, but none who have had any thing like serious difficulty in obtaining a proper amount of rest.

In many cases this want of sleep in pregnancy does not sensibly impair the general health. Some persons have been under the necessity of walking their room much of the night; and yet, after a short repose at the dawn of day, have been astonished to find themselves as much refreshed, apparently, as after a good night's rest.

Treatment.—To prevent sleeplessness in pregnancy, a variety of means have been recommended. If there is plethora, or too great fullness of the system, small bleed-

ings and cooling purgatives of mild kind are recommended by almost every author who has written on the subject. It is well known that in many parts of the country, women believe that they cannot get through pregnancy at all without being bled. The doctors have been at the root of this matter in the beginning. This old-fashioned practice, fortunately, is now fast going out of date. It is not for me here to enter into a discussion of the question whether such means ever do any good in pregnancy; but I will say, on the authority of physiological and pathological science, and my own experience, that bathing, water-drinking, and the proper regulation of the general habits, are incomparably the best modes; the best, not only for the time of pregnancy, but also for that of childbirth and the period of nursing.

Dr. Dewees recommended for this affection, low diet, cool air, and cold water, as being among the best remedies. And Dr. Denman says, that "a glass of cold water drank at bedtime is not a contemptible remedy;" and he might have said one of the best, especially if the dose be soon repeated. And Dr. Dewees, in quoting this advice of Dr. Denman, adds, "We know that bathing the hands and face in cold water is an excellent practice, and should always be resorted to."

Dr. Maunsel says, "Pediluvia (foot-baths), or, what is better, hip-baths, very often do good." But the important matter of temperature, the doctor does not speak of. A warm hip-bath and a cold one are very different things. He remarks, also, well, "that the diet should be cooling, and exercise in the open air as freely as circumstances will permit."

I may, however, dismiss this whole matter of sleepless-

ness in pregnancy, by saying, that those who bathe daily, exercise judiciously, and, when possible, in the open air, drink only pure soft water (and all can have this from the clouds), partake only of plain and unstimulating food, and sleep upon hard beds and pillows, in cool, fresh air, will rarely, if ever, be troubled with want of sleep.

One other thing, however; it sometimes seems necessary for persons in pregnancy to get a "nap" during the day. Those who have great cares, and many in our country have, often find it extremely difficult to get through the long, hot days of summer without sleep. Now, in such cases, if the woman can go by herself, and be wholly undisturbed, and feel entirely free from every care, and thus get a good half hour or an hour's sleep, she will be much refreshed thereby. It is necessary to observe that the clothing should be removed as at night. Persons often wonder how it is that they feel worse after sleeping than before. When one lies down, if the clothing be left on, too much heat is retained about the surface, and thus debility, instead of refreshment, is experienced. This day-sleeping should be done with the stomach empty, as at three or more hours after a meal, and not in the afternoon, as that would be liable to cause wakefulness at night. It is truly surprising how much, under favorable circumstances, a short sleep even will refresh the powers of life.

HEART-BURN.

This is not unfrequently one of the first unpleasant symptoms that women experience after becoming pregnant. It sometimes becomes very distressing, and difficult to manage according to the ordinary modes. "It is generally,"

says Dr. Dewees, "very distressing and very difficult to subdue." He had known large and repeated doses of the alkalies given with scarcely any temporary alleviation, and much less, permanent benefit.

The great cause of heart-burn in pregnancy, as well as in other cases, is acidity of the stomach; and acidity of the stomach comes from improper food. Very seldom, indeed, can a pregnant woman be troubled with heart-burn, acidity of the stomach, or vomiting, if the dietetic and other habits be regulated according to principle. Pregnant women, in this country of abundance, generally eat a great deal too much food. They have also too little exercise in the open air. Some, indeed, have too much exercise, as in doing household work; but more are injured by doing too little than too much. But in this country ninety-nine of the one hundred *eat too much food while in the pregnant state.*

Treatment.—To cure the heart-burn, let the woman, when she first experiences it, at once desist in the quantity of food. If she rises in the morning and finds the symptom upon her, she may be certain that digestion has gone on badly the day previous, and that the stomach contains portions of the undigested aliment which has passed into the acetous fermentation, and thus causing the difficulty she experiences. What is to be done in such a case? Will the introduction of another portion of food into the already disordered stomach make matters any the better? Certainly not, except for a short time. When the stomach is goaded on by a new meal, the individual may feel the better for half an hour; but, other things being equal, it in the end only makes the matter worse. Fasting a meal or two, with water-drinking for its tonic effect, is the best possible means. The stomach, thus, has time to regain its

vigor, and food taken in moderation, subsequently, will then be found to agree perfectly well. It will here also surprise any one to learn how small an amount of food is really necessary, with water-drinking, to sustain the strength.

If the heart-burn is very troublesome, it will be found of great relief for the patient to vomit by means of water. This, in most cases, will take place very easily by drinking, in quick succession, a number of tumblers of soft water, about blood-warm temperature. This, with a little help, as by putting the finger in the throat, will be found sufficient; and if, in any case, the vomiting does not take place, the water yet does much good by means of diluting the offending matters in the stomach. Thus, suppose there is one ounce of acid matters in the gastric cavity, and that ten ounces of pure water are introduced therein, the offending mass is weakened tenfold; so that even if vomiting does not take place, great relief is experienced. I would not have any one make too great an effort to produce vomiting, especially in pregnancy, for hard vomiting might cause abortion. There is, however, no danger except the vomiting caused by drug substances. Water-vomiting is easier than can be imagined by those who have tried only the old modes.

Soda and other alkalies, taken so often to ease heart-burn, do more harm than good in the end. The wet girdle, worn occasionally about the abdomen, and managed so as to produce a cooling effect, will be found of great service in invigorating the stomach, thus tending to prevent heart-burn, acidity, and the like. So, also, the general ablutions, which ought never, for a single day, to be omitted during pregnancy, as we may say, too, of other times.

In heart-burn, arising from whatever cause, it is a very common custom, both with the profession and the people, to give alkalies, as magnesia and chalk. Dr. Dewees, I remarked, had known large and repeated doses given, with scarcely any temporary alleviation, much less permanent benefit. It is of little effect, certainly, to continue giving these articles, when at the same time the dietetic habits are such as are certain of keeping up the difficulty. This would hold true even if the articles administered were perfectly neutral in their effects as to harm, which can never be the case. All drug substances, however much good they do, at the same time cause a certain amount of harm. The articles, magnesia and chalk, the ones generally resorted to in this difficulty, are moreover often impure. This is particularly true of the latter article.

Dr. Dewees mentions a case in which the lady's health was utterly destroyed by her enormous use of chalk. "I formerly attended a lady, with several children," says he, "who was in the habit of eating chalk during the whole term of pregnancy; she used it in such excessive quantities as to render the bowels almost useless. I have often known her without an evacuation for ten or twelve days together, and then it was only procured by enemata (injections); and the dejections were literally chalk. Her calculation, I well remember, was three half-pecks for each pregnancy; she became as white nearly as the substance itself; and it eventually destroyed her, by so deranging her stomach that it would retain nothing upon it." I repeat, that these alkaline substances always and inevitably do more harm than good; and the part of wisdom is to do without them.

CONSTIPATION.

During the early months of pregnancy, there appears to be a greater tendency to constipation than in the latter months, a fact which is the direct reverse of what we should expect from *a priori* reasoning. But during the whole period, constipation is more apt to occur than at other times.

Constipation is exceedingly common among all classes of females in this country at the present day. The American people have such a predilection for fine food, it is a hard matter to make any great change in this respect. It is in the dietetic habits, more than in any other, that we are to look for the causes of this evil.

Superfine flour is, I hold, the greatest of all causes of constipation. I know tea and coffee, which are astringent articles, have a tendency to cause this condition of the bowels; and the same may be said of idleness and physical inactivity; but too great richness of food—and superfine flour is the article most concerned in this—is the great cause of constipation. Our country abounds with it everywhere. By our numerous railroads and canals, superfine flour is transported from one end of the country to the other, so that in large districts, where formerly the people were in the habit of eating coarse bread, as of rye and Indian, and were consequently more healthy, they now use the superfine. Even a beggar would sneer at one for offering him brown bread.

Constipation, common as it is everywhere among females, is still more common in pregnancy. This arises, first, from the pressure of the enlarged womb upon the lower bowel; and second, there being a new action set up

in the uterus, there is, as a natural consequence, a greater tendency to torpor in the bowels; but the principal cause is that of the pressure.

This condition of the bowels induces of itself numerous other difficulties. Headache is often brought on solely by constipation; that is, in many cases we remove the constipation, and the headache is sure to leave with it. Sickness of the stomach and vomiting are always aggravated, and often caused by it. The same also may be said of heart-burn, palpitation, and fainting. Sleeplessness, and, in fact, almost every one of the disorders of pregnancy, may be said to be either caused directly, or greatly aggravated, by constipation of the bowels. Even miscarriage has been known to be induced by it.

Some persons have gone an almost incredible length of time without any movement of the bowels. A whole week is not uncommon. Dr. Dewees mentions a case of fourteen days, and no doubt there have been those who have gone one to three whole weeks.

Treatment.—What have we to do in order to cure constipation of the bowels? Does not every person of common sense understand at this day, that the more we dose the system for constipation, the more we may? Let those answer who have tried these things. Always, other things being equal, the more we take drugs for constipation, the worse it grows. We must therefore look to some other means of cure.

Constipation of the bowels may always be cured, and this by the most simple means. Dr. Dewees mentions a case where a lady had suffered three successive miscarriages from this cause, and by the constant use of brown bread, drinking only water, and taking no animal food or

broths—taking now and then a little castor-oil, or the like, which, however, he did not reckon upon as having done any material good—enabled her to pass safely through the whole time. We need here only mention, in general terms, that constipation in pregnancy is to be cured just the same as constipation in any other case. Brown bread, fruits, and vegetables, with a very moderate use of milk, if the patient desires it; regular exercise, the hip-bath, wet girdle, injections of cold water, or tepid, if that is preferred—these are the means to be used. The brown wheat or rye mush will be found most excellent. No woman, if she can have brown bread, and occasionally an injection, need ever suffer from constipation of the bowels.

DIARRHEA.

Sometimes the reverse of constipation occurs during pregnancy; namely, diarrhea. This also not unfrequently alternates with constipation. Constipation, however, is the most frequent symptom.

Treatment.—Singular as it may appear, diarrhea should be treated on the same general principles as constipation. Fortify and invigorate the general health, observing at the same time a correct general regimen, and either symptom disappears. In diarrhea, the hip-bath, often repeated, the wet girdle, and cold injections, taken as often as there is any disposition for the bowels to act, are effectual means. The diet should be regulated on the strictest principles. If a diarrhea is very severe, entire abstinence from all nourishment, except water, for a day or two, is a very salutary remedy. Food should then be taken with the same precautions as in nausea and vomiting.

PILES AND HEMORRHOIDS.

Piles and hemorrhoids are more apt to occur in pregnancy than at other times; and when these already exist, they are apt to become worse at this period. Constipation being more apt to occur in pregnancy, and that condition of the system being the one in which these symptoms are most liable to occur when the woman is not pregnant, so also they occur more frequently now than at other times. The constant pressure of the fetus upon the blood-vessels within the pelvis has also an agency in the matter, because every thing that causes sluggishness of circulation tends to bring on piles. So also the more sedentary habits of many females, during the period of pregnancy, are often a cause of this difficulty; but in other cases the opposite extreme is practiced—too much exercise or standing on the feet. Both these extremes may cause piles in pregnancy, or aggravation when they previously existed. Cathartic medicines not unfrequently bring on a "fit of the piles."

This affection always denotes a wrong state of things in the general health. A really healthy person can never have the piles. Some, however, who are what would be termed tolerably well and strong in general health, experience such symptoms, but such is not the rule. Old cases, particularly, denote derangement of the general system.

When piles come on suddenly, they are often attended with very great pain and suffering to the patient. Not only is the pain great at the part affected, but there is also feverishness, pain, and a very unpleasant feeling in the head, with deep and severe pain in the back.

Treatment.—As to the treatment and general management in this affection, we should of course do the best that may be for the general health. As a general fact, no surgical operation should be allowed upon piles during pregnancy. These operations are often attended with so great pain, that abortion might be the result.

There is nothing in the world that will produce so great relief in piles as fasting. If the fit is severe, live a whole day (or even two, if necessary) upon pure, soft, cold water alone. Give then very lightly of vegetable food. Those who have suffered the agony of this affection, if they will but have patience to try this means, will find the truth of my remarks.

Water applications are also very useful in this disease. Dr. Dewees observes: "The pregnant woman may derive both comfort and advantage from sitting in a demi-bath of cold water, for five or ten minutes at a time, two or three times a day, when the complaint is advancing, or when about to retire; that is, after the severer symptoms have abated, or before they are high." This advice is partly right and partly not. There is a notion with many that cold water-applications in high inflammation are not good; that they increase the difficulty instead of making it less. Thus in a burn, it is said that after the application of cold water the pain becomes worse. This is not true, although it appears to be so; for so great is the relief afforded by the application, that the pain *appears* worse, when in fact it is not; but only keep on continuously with the cold water-treatment, and the pain does not return at all. Such at least is the fact in all burns, however severe, when the surface is not destroyed; and the same principle holds good in all high inflammations from whatever

cause. Very frequent sitz-baths, or merely washing the part often in cold water, will be found excellent in these severe cases of piles. Cold compresses worn upon the part also afford great relief. Cold injections are also useful. But, as before mentioned, *fasting and the regulation of the diet* are the great means.

LETTER XVII.

DISORDERS OF PREGNANCY.

Headache: the Nervous and the Plethoric kinds—Stye in the Eye—Salivation—Hemorrhage from the Stomach—Cramp of the Stomach—Toothache—Jaundice.

HEADACHE is one of the most common of all the disorders of pregnancy. It may occur at any part of the period; in the early months, it is supposed that nervous headache is most apt to occur; in the latter, headache arises more frequently from plethora. In such cases there may be throbbing of the temples, suffusion of the eyes, ringing in the ears, indistinct vision, and flashes of light passing before the eyes. If the headache gets to be very severe—*splitting*, as we may say—there is danger of either apoplexy or puerperal convulsions. But these things, be it remembered, do not come upon those who live moderately and temperately, lead an active, industrious, and regular life, go often into the open air, and practice daily ablutions.

That form of headache in pregnancy which occurs often, and is not a sick or nervous headache, so-called, is regarded by authors generally as being a very serious affair.

Treatment.—Dr. Maunsel says of the nervous form of this disease: "This, especially if it take the form of hemicrania (that in which the pain is confined to one half of

the head), is one of the most unmanageable of all the dis eases of pregnancy."

According to the old practice, prompt and decided measures must be taken in these cases, especially if the affection is of that form arising from a general fullness of the system.

"If the state of the system indicates bleeding," says Dr. Maunsel, "it will commonly do good; local should be preferred to general bleeding. If bleeding is not indicated, we should at first attend to the secretions; when these are corrected, antispasmodics and anodynes come in well. Hyosciamus and camphor, a grain of each, is a good remedy; also the volatile tincture of valerian. The external application of some anodyne extract, as stramonium, belladonna, or cicuta, may be tried, but with caution, lest they produce the poisonous effects of the drug."

Dr. Churchill remarks: "These nervous headaches may usually be relieved by antispasmodic medicines, or diffusible stimuli, such as valerian, hartshorn, etc.

"Eau de Cologne applied to the forehead, or a blister behind the ears, is often useful.

"A brisk purgative should also be given occasionally.

"A much more active treatment will be necessary when there are any symptoms of plethora, or vascular excitement about the head, both for the relief of the pain and for the purpose of anticipating evil consequences. Blood should be taken from the arm, in quantity according to the strength of the patient and the relief afforded; and this should be repeated, or leeches applied to the temples, if necessary. We are not to rest satisfied that enough has been done until the pain is relieved, and the arterial system reduced to the ordinary standard.

"After a certain amount of good effect has been produced, great benefit will often result from the application of a blister to the nape of the neck."

Now compare with the above practice of bleeding and and dosing, *secundum artem*, the true and rational one.

In nineteen cases out of twenty, the nervous headache comes from either tea or coffee drinking, or the use of improper food. Only remove the causes, then, and the difficulty vanishes. Strange to say, however, there are many women who have either so little confidence in what any one can say to them, or so little control over themselves, they will not even make the experiment. Should one who has been cured tell them the fact, they will not yet believe; nor would they if one should rise from the dead. Such persons—those who have the truth set before them, and yet will not act—are welcome to all their tea and coffee, their fine food, their bleeding and dosing, and their sick headache.

STYE IN THE EYE.

This form of boil, occurring on the eyelid, sometimes appears as one of the disorders connected with pregnancy, more particularly in its earlier part.

Stye is much more apt to happen with those who have a disordered stomach than with the healthy. As a general rule, however, it may be regarded that boils are healthy; that is, it denotes a very good state of the vitality, when it has the power thus to throw morbid matter out of the system. Still, it is yet more healthy to have the body so pure that it has no need whatever of symptoms of the kind of which I am speaking.

A stye is much more painful than might be expected, considering its small size. This is owing both to the vehemence of the inflammation and to the excessive sensibility of the part upon which it is situated. The disturbance caused by it may become so great as to amount to a good deal of feverishness and restlessness, attended not unfrequently with a severe pain in the head.

Treatment.—We cannot do a great deal in such cases, except to let matters take their own course. It is productive of a good deal of relief to hold the eye in tepid water, and if the patient will consent to live two or three days almost wholly without food, the suffering will be rendered much less, and the stye will come the sooner to a head.

SALIVATION.

There is often a greater or less degree of this symptom during the period of pregnancy. Probably all women experience, at this time, a more than ordinary flow of the salivary fluid. This sometimes becomes very excessive and troublesome to the patient, especially at night, when the sleep is disturbed by the frequent necessity of emptying the mouth. Dr. Dewees observes: "It is almost always accompanied with acidity of the stomach and constipation of the bowels; the fluid discharged from the mouth, for the most part, is perfectly colorless and transparent; at other times it is more tenacious and frothy, and the quantity poured out is sometimes incredibly profuse. It almost always has an unpleasant taste, though not attended with an offensive smell; it keeps the stomach in a constant state of irritation, and not unfrequently provokes vomiting, especially if the saliva be tenacious, and requires

an effort to discharge it." This author relates a case where salivation commenced at the second month of pregnancy, in which the patient discharged daily from one to three quarts of salivary fluid, and became so weakened thereby, that she was unable to sit up without immediately fainting.

The above description of salivation in pregnancy may be said to apply to patients who live according to the ordinary modes of society. I have, during nine years past, known many women who have passed through pregnancy, practicing at the same time daily bathing, water-drinking, exercising regularly in the open air, with plain diet, and in no instance have I known salivation to prove at all inconvenient or troublesome. I judge that this affection, if such we may call it, can only come on when the general health is at fault, or the dietetic and other hygienic habits bad. True, there is probably always more or less increase of the salivary secretions in pregnancy, but if good habits are daily persevered in, I think no one will be troubled at all in this matter.

I find in a late work on Females—Professor Meigs's—the following remarks on this subject, which go to show, on good authority, the uselessness of drug-treatment in this affection:

"I am sorry to tell you (the Professor addressing himself to his class), that I know of no remedy at all to be depended upon for the management of these great salivations. They are the troublesome concomitants of the gestation, and they cease with the cessation of the gestation. They cannot be cured by alkalies or acids, by venesection or purgation, or by any therapeutical treatment with which I am acquainted. If it were just, always to attribute the

salivation to a state of the stomach, then it would be reasonable to apply remedies with a view to correct a faulty state of that organ, in hopes of curing the salivation."

All this goes to prove, that you who are troubled with this affection are to depend upon the rational means, air, exercise, diet, and water-treatment, and not upon drugs, to remedy it. Mark too, how, year by year, the superiority of these hygienic and curative influences is being recognized by medical men, and how the old methods of dosing the system are going into disrepute.

HEMORRHAGE FROM THE STOMACH.

In consequence, probably, of a general fullness of the system, or perhaps from the cessation of the menstrual function, a discharge of blood sometimes takes place from the stomach, in the earlier periods of pregnancy. It is generally small in quantity, and continues but a short time. The occurrence, generally, causes a good deal of alarm to the patient, but it is seldom to be looked upon as a dangerous affection.

Treatment.—If the hemorrhage arises from too great fullness of the system, a reducing process should at once be commenced—not by drugging the system, or by bloodletting, but by abstinence and fasting.

If the discharge should be at all alarming, we should place cold wet compresses upon the abdomen; we should, in short, proceed upon the same general principles as we would in any other case of hemorrhage.

If the bleeding occurs in consequence of hard vomiting, as it sometimes may, we should take measures to arrest that symptom.

I remark, in conclusion, that this affection is a very unfrequent one, and such, in most cases, as should cause no alarm.

URINARY DIFFICULTIES.

Incontinence of urine is quite apt to occur toward the end of pregnancy.

It arises often from the pressure of the womb upon the neck of the bladder.

There is a notion with some of the "old women," that incontinence of urine is an indication of good labor.

Treatment.—This difficulty cannot, of course, be altogether remedied; the cause cannot be removed. It may be lessened, however, by short and frequent hip-baths, wet bandages, and cold bathing. Drinking soft water instead of hard, will also be found to have a good effect in all difficulties of the bladder whatever.

Blisters are always liable to bring trouble upon the urinary organs, but more particularly so in pregnancy. The system is then in a more excitable or impressible state. Strangury in pregnancy is a very distressing and untoward symptom when it follows the use of blisters. Dr. Dewees had known cases where entire retention of urine followed the use of blisters, so obstinate that it could only be relieved by the catheter, causing a distressing inclination and violence of effort, only to be surpassed by labor itself. Retention may also come on from other causes.

Treatment.—It can be very seldom indeed necessary to resort to the use of the catheter for draining off the urine, if cold hip-baths, cold foot-baths, and even the cold general

bath, if necessary, be sufficiently persevered in. Cold has a truly wonderful effect in causing the flow of urine.

CRAMP OF THE STOMACH.

This affection, as it occurs in pregnancy, is most common with those whose stomachs have become much enfeebled by dietetic improprieties, excess in the use of warm drinks, and by the abuse of medicines.

Treatment.—By way of comparison, let me present you with the remarks of a celebrated European author, Doctor Churchill, concerning the medical treatment of this affection, that you may see what you think of the reasonableness of it. He says:

"Our first object is to quiet the pain by a full dose of laudanum.

"When this is attained, we may proceed to remove the cause, and to arrest any intestinal irregularity. Dr. Burns recommends aloetic purgatives, but these may not in many cases be suitable. If there be piles, as is very often the case with pregnant females, they will rather prove injurious than beneficial. I have found Gregory's powder, electuary of sulphur and senna, or castor-oil, to answer the purpose better.

"During the intervals of the attack, tonics (of which oxide of bismuth or preparations of iron are recommended) or stomachics may be exhibited. A belladonna or opium plaster, or a blister over the stomach, is often very useful.

"Should the attack be very severe, bleeding, or leeches to the epigastrium, may be advisable; this will be especially the case should there be any symptoms of conges-

tion about the head, and more for the purpose of preventing an attack of convulsions, than even for the relief of the gastric affection."

Assuredly you will say that drug-treatment affords a *variety* of resources, notwithstanding it is so little to be depended upon.

I need hardly hint to you how much better, safer, and more effectual the water processes are than all the drugs of the *materia medica* to cure a case of cramp in the stomach.

If it is a bad case—acute, as we say—at once drink warm water enough to cause speedy vomiting.

The tepid clysters, used to the extent of gallons, that is, by repetition, if need be, is also a serviceable remedy.

We also use wet compresses, frictions, and the hip-bath, if necessary; but as a general fact, as soon as we cleanse the stomach and bowels thoroughly, the cramping ceases.

Afterward, as in all cases of stomach ailment, and all other ailments, great care should be observed in regard to the food.

TOOTHACHE.

Breeding with a toothache is an old proverb. Toothache is certainly more apt to occur during pregnancy than at other times, and not unfrequently it is a very early symptom of this state. And what may appear singular, the teeth ache without being diseased. Especially those who drink strong tea and coffee are more subject to this nervous toothache, as we may term it; toothache where there is no decay. Ceasing with the cause, then, is the surest means of relief.

Treatment.—It is dangerous to extract teeth in the early months of pregnancy. The operation has been often known to cause immediate abortion. There is the greater danger of this in the early months.

Bleeding has often been practiced for this affection in pregnancy; but that is a worse than useless resort, and moreover, generally fails of the object. After a few days of full diet, the affection is quite certain to return, and appears to be even the more obstinate for the bleeding. Fasting, with water-drinking, is a much better mode. Very seldom will toothache withstand twenty four hours' entire abstinence from all food. If the face has become much swelled, of course so great relief could not be experienced in so short a time. But even then the fasting is of incalculable good. General bathing, and going into the open air, are also excellent means. The rubbing wet-sheet is particularly applicable. And Dr. Burns, in his work on midwifery, years ago said, "Sometimes a little cold water held in the mouth abates the pain." This will be the case whenever the toothache is one of inflammation; but if it be of the more nervous kind, warm water will give more relief. If the nerve is much exposed, it is perhaps always best to hold warm, or at least lukewarm water in the mouth, and at the same time to practice very brisk and continued rubbing of the face, temples, neck, etc., with the hand wet often in cold water. Wet bandages upon the face are also good. If the aching be of the nervous kind, that is, without inflammation, warm bandages, often repeated, afford the most relief.

I must repeat, that I hope none of you will ever consent to have your teeth extracted, or in any way operated on, while pregnancy exists.

JAUNDICE.

This, as a disease of pregnancy, is one that most frequently makes its appearance in the latter months of the period.

This state of the system should not be confounded with that in which the woman acquires a dark, almost yellow color, which, however, is not jaundice, and readily passes off after the delivery has taken place.

Causes.—In pregnancy, as at other times, this affection is often preceded by a disordered state of the stomach and alimentary canal generally. There is also, generally, a sense of weight and tightness in the abdomen, especially at the pit of the stomach, and in the right side. But in some cases none of these symptoms are observed.

Sometimes abortion has happened in connection with this state of the system; such, however, is not often the case.

Treatment.—If it is attended with violent symptoms, as is sometimes the case, it will be necessary to use active measures to cure it. In a majority of cases, however, a few days of abstemious living, alternating now and then with a day of entire fasting, together with plentiful drinking of pure, soft water, and a moderate share of bathing, will suffice to effect a cure. The wet-sheet pack is especially useful in these cases.

LETTER XVIII.

DISORDERS OF PREGNANCY.

Difficulty of Breathing—Pain in the Right Side—Itching of the Genitals—Swellings of the Limbs—Cramps of the lower Extremities—Pain of the Breasts—Hysteria—Physical Hindrances—Exposure to Disease.

TOWARD the latter months of pregnancy, there is always, necessarily, more or less difficulty. The uterus becomes so large, and fills so much of the abdomen, that the upward and downward motion of the diaphragm, or partition between this and the chest, is greatly impeded. Hence the dyspnœa, or difficulty of breathing. A cough, likewise, not unfrequently attends this symptom, and becomes so severe in some cases as to cause abortion.

Prevention.—Great and protracted exertion, severe fatigue of whatever kind, bodily or mental, ought to be avoided during pregnancy. Running up stairs too quickly, walking too rapidly, and any undue mental excitement, increases this difficulty of breathing. Some mothers are in the habit of taking up heavy children needlessly, and carrying them, which is one of the most certain means of doing harm to themselves. So also, inaction is bad for the breathing. If the individual do not have exercise enough to answer the purposes of health, the system becomes more plethoric or full, and thus also the difficulty is increased. The medium of neither too little nor too

much should always be observed. The same also may be said of the diet. And here I remark, that if any pregnant woman will carefully make the experiment, she will find that in the latter months of pregnancy, an exceedingly small allowance of food only, with free water-drinking, bathing, and moderate exercise in the open air, will be sufficient to keep up her strength, and that in a most remarkable manner. Let her not be deluded by the old maxim, that because there are two to support she must take a greater amount of food.

PAIN IN THE RIGHT SIDE.

After gestation has passed the middle of its term, there is experienced often more or less pain in the right side. This does not usually happen until after the beginning of the fifth month of pregnancy. It comes on as a deep-seated pain in the immediate region of the liver; often it is merely a trifling sensation at first, increasing as pregnancy advances. It is not increased by ordinary inspirations, as many internal pains are, although a very full and deep inspiration may augment it in a slight degree. The pain is seldom, almost never, very great; it is constant both day and night, but worse in the latter. The patient can lie on either side, but better on the left. A severe sensation of heat is sometimes experienced at the part where the pain exists. This is sometimes almost constant, at others only occasional, and in still a greater number of instances, nothing of the kind occurs.

Women are more subject to this affection during the first pregnancy than at subsequent times. It may, however, be experienced after a number of children have been

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borne; this is true more especially in those cases when the child is carried "high up," as it is called. This comes from the fact, that the pain is caused by the pressure of the upper part of the womb upon the liver, which lies mostly upon the right side.

Treatment.—No material harm can be said to come from this pain, and for this reason no harsh and severe medical treatment should be adopted with a view of removing it. Bleeding is well known to be a common remedy for ordinary pains in the side. But Dr. Dewees, of Philadelphia, whose experience was so great in all matters pertaining to midwifery, remarks of this practice, that so far as he had seen it, not the slightest advantage had arisen from it. "Nor," observes this candid writer, "has any other treatment which we have advised been any more successful. Leeching, cupping, and blistering, have in turn been employed without benefit. Indeed, we have now ceased to prescribe for this complaint, unless it be attended with some alteration in the circulating system; if this be disturbed, and the pulse tense and frequent, advantage is sometimes experienced from the loss of blood and gentle purging, as this pain may be aggravated by this condition of the system. But in this instance, we prescribe for the general condition of the system, and not for the local affection—as we should have to do most probably as much, were this pain in the side not present." These are the candid remarks of one whose experience in treating diseases of women was as great, probably, as that of any other man, showing conclusively that ordinary means are of no avail in this difficulty.

Now I can speak confidently in this matter. The water processes are effectual in mitigating this pain much, to say

the least. I conclude it is rather a symptom of debility than otherwise. I do not believe it natural. Bathing to support the general strength, and particularly the wet girdle, often rewet, especially in hot weather, so as to keep it at all times cool, and hip-baths, with a good share of friction by the wet hand over the part affected, will be found excellent means. The *immediate* relief caused by the application of the wet girdle will be often astonishing. Keeping the bowels freely open, as by the habitual use of brown bread, mush, and the like, and injections of cold water, are also of service here.

But if, in any case, the pain resists all remedial means, and as we have before said, those of a severe nature should never be resorted to, the individual should not allow her mind to become depressed by thinking that harm must inevitably be caused in consequence of it.

Too much, as well as too little exercise, may cause this difficulty. A proper medium should therefore at all times be observed.

ITCHING OF THE GENITAL ORGANS.

Pruritus pudendi, or itching of the genital parts, becomes sometimes a most troublesome and distressing complaint in pregnancy—so troublesome, indeed, as utterly to set decency at defiance. Cases under the ordinary modes of treatment, have been known to be so severe as to compel the lady to remain in her chamber for months.

The causes of this affection cannot always be ascertained. A want of proper cleanliness is no doubt often one of the principal sources of it.

A great variety of remedial means have been used in this disease. Astringents, such as alum, borax, acids, etc.,

are the agents indicated. But cold is the greatest astringent of all; no matter how troublesome the affection, it is completely within our control by the use of cold hip-baths, cold cloths, ice, and the like. In a late number of Braithwait's "Retrospect," one of the leading English periodicals of medicine and surgery, it is stated by Dr. James Arnott, "that a most distressing attack of this affection was completely subdued by two congelations, each of about thirty seconds' duration, after a prussic acid lotion and other routine applications had been tried in vain." By "congelation," Dr. Arnott means the application of intense cold, by the use of ice between cloths, or some freezing mixture, but not an actual freezing of the parts, as some might suppose. But shallow hip-baths of cold water from a well, persevered in, will be found sufficient in every case.

It should be remembered that *uncleanliness* is a most fruitful source of this troublesome affection.

SWELLINGS OF THE LIMBS AND VARICOSE VEINS.

Swellings of the lower limbs, and varicose or knotty and swelled veins, may occur in pregnancy from the same causes as piles and hemorrhoids, namely, an obstructed circulation.

Washing the parts affected with cold water, and attention to the general health, are the means to be used here. Do no violence to the system. The exercise should be moderate. Nor should the woman be too inactive; the medium course in all cases is the better rule.

If the patient can find time to lie down a number of times during the day, removing her clothing at each time, she will find the practice a good one.

CRAMPS IN THE LOWER LIMBS.

Toward the close of pregnancy, cramps may occur in the lower extremities, because of the pressure of the child upon the large nerves that pass down them. This is seldom very troublesome, and cannot, of course, be altogether prevented. Too great fatigue, and any thing that tends to depress the general health, will at least make the matter worse than it otherwise would be.

PAIN IN THE BREASTS.

Mastodynia, or pain in the breasts, is more common in the first pregnancy. Compression by clothing may cause the difficulty. Washing the parts with cold water, and wet bandages or cloths worn upon the parts, are the means to be used. If the pain is of a spasmodic kind, it may be best in some cases to use warm fomentations.

HYSTERIA.

There appears to be with many a greater tendency to hysterical symptoms during pregnancy, than at other times.

Hysterical females are, for the most part, those who live a life of excitement, attending frequently balls, theaters, and public exhibitions late at night, and especially such as are much addicted to tea and coffee drinking, the use of concentrated and stimulating food, and have little exercise in the open air.

Treatment.—Medicines, especially the preparations of opium, also have a tendency to cause hysterical symptoms. Pregnant women should, then, as far as possible,

avoid these causes of so pitiable a disease. Whether in pregnancy, or at other times, hysteria cannot come upon those who live correctly, and maintain at all times good and permanent health. I will here further remark, that all novel-reading should be avoided during pregnancy; and the less the better, I may say, at all times, of such novels as ninety-nine hundredths of all that are put forth at the present day.

PHYSICAL HINDRANCES.

There are various *mechanical* inconveniences connected with this state. In the earlier months more particularly, there is pressure upon the rectum, causing a tendency to constipation. This should be guarded against, not by "the due administration of mild laxative medicines," for that only tends to make matters worse in the end, but by the use of proper food, such as cracked wheat or rye, brown or unbolted bread, Indian mush, well boiled, and good fruits and vegetables, in their season. Exercise, employment, daily bathing, and clysters, tepid or cold, according to the season, and the patient's strength, should all be brought to bear in the case.

Pressure upon the urethra, or neck of the bladder, is also one of the mechanical evils of pregnancy, rendering the evacuation of urine difficult, and sometimes painful. To prevent this, the patient should be exceedingly careful to evacuate the bladder frequently, and never to allow the calls of nature to go unanswered; nor should she stand or walk too much at a time, as this is calculated, in a powerful manner, to increase the difficulty. The same may be said in regard to the feeling of weight which is experienced in the loins during the early part of the period; and in

reference to all these mechanical evils of pregnancy, I remark that it is of great service for the patient to recline, for a short period, a number of times a day. If she is of active disposition and habits she may not feel inclined to do so; yet she will find the practice a good one, and productive of much comparative comfort.

If the abdomen becomes too pendulous, as it sometimes does, owing to the flaccidity of the abdominal parietes, a considerable degree of relief may be obtained from stays of a proper construction. These, however, should be so fashioned and arranged as not to overheat the parts, otherwise they will be made weaker, and thus more harm than good will be the result. The wet girdle, suitably applied, is an excellent appliance. Nor should any of these helps be used too much of the time.

EXPOSURE TO DISEASE.

Pregnant females should not expose themselves to infectious diseases; although it appears to be established that they are not, under such circumstances, as liable to contract such disease as at other times. Still, if they do contract them, the result is likely to be a more serious one; and in case the mother escapes, the child may suffer, and abortion, even, may be the result.

VACCINATION.

I am opposed to vaccination at all times. It is better, I believe, to live carefully and consistently in all respects, and trust nature for the result. There are many objections to vaccination, which I need not here mention. Pregnant

women especially, who are necessarily, in the present state of things, more than others, subject to inflammatory diseases, and less liable, when attacked by acute disease, to recover therefrom, should not be vaccinated. Here are Professor Meigs's earnest injunctions on the subject. Writing to his class, he observes:

"Pregnant women ought not to be vaccinated. This is a rule which I would advise you to depart from only on the most urgent occasions. If a woman have been ever vaccinated, and appeal to you to re-vaccinate her, because there is a prevalent variolous epidemic, I hope you will refuse to accede to her request. Small-pox is exceedingly and peculiarly pernicious to pregnant women. She who has it, and miscarries, or who is brought to bed at term, generally dies. It is, in my opinion, inexcusable to expose her to so great a risk—a risk far greater than that from accidental contagion, or that of the epidemy. But the vaccine is identical with the variolous animal poison, saving some lessened intensity of its malignant form, derived from its having been modified by the nature of another mammal. To inoculate a cow with small-pox virus, is to give her the vaccine disease, with the lymph of which you can vaccinate, but not reproduce unmodified small-pox. Keep your pregnant patients clear of small-pox, in all its forms, whether modified or unmodified. Do not vaccinate them. I have been the witness of dreadful distress from the operation. Eschew it, I entreat you."

By way of digression, we may inquire, if pregnancy is an objection to vaccination, why should *any* person be vaccinated? If those who are in a condition which renders them most susceptible of disease should not be exposed to the variolous poison, why should others who are less sus-

ceptible? If any are to take the risk of small-pox without vaccination, I think the strong can afford to do it, rather than the weak. If vaccination is good for any thing, it should be, I think, the most worth for those who are the most liable to harm from the variolous disease.

LETTER XIX.

DISORDERS OF PREGNANCY.

Nervousness—Mental Despondency—Longing—The Imagination—Effects of Fright.

During that portion of the woman's life in which she is capable of bringing forth children, a period usually of about thirty years, the uterus may be justly considered as the great center of her system. The truth of no observation in medicine has been more generally acknowledged than that of the extreme irritability of this organ, and of the propensity or aptitude which the whole body has to become affected or disturbed by its influence. In the progress of the development of the procreative function, great changes take place; and in pregnancy these effects are not the less remarkable.

The changes which are wrought in the system by pregnancy are not less remarkable in the nervous system than in the other parts of the body. The womb itself is highly endowed with nervous connections and sympathies, and in many respects the uterus, during the child-bearing period, may be considered the great nervous center of the female.

When it is remembered how extremely impressible the nervous system becomes during pregnancy, we are taught the importance of preventing women, under these circumstances, from witnessing things that are calculated power-

fully to excite the mind. This caution is especially to be observed in regard to exposing her to scenes of suffering, distress, danger, or the agonies of a death-bed. It is a sad thing for a pregnant woman to lose a husband, child, or other near and dear friend.

Pregnant women should be very careful to avoid the sight of convulsive and nervous affections. They should not, on any account, be present when another is in labor; for it has been observed that some become greatly terrified under such circumstances, while of themselves they are able to pass through its agonies with all commendable courage.

MENTAL DESPONDENCY.

When we consider how important an epoch the period of pregnancy is in a woman's life, we cannot be surprised that her mind should sometimes fall into a state of depression, out of which it is not in her own power, or that of any who are about her, to recall it. In the first pregnancy especially, the mind is apt to become thus affected. Shall I be able to survive the period? Shall I bring forth a well-formed, or a diseased, misshapen, deformed child? Will it not present badly at birth? Shall I not have twins, or triplets, perhaps? What new and untold agonies must I be brought to endure? These, and the like questions, must suggest themselves to the mind of every sensible and reflecting woman, and more particularly so when she is carrying her first child. And so it should be; for, say what we will about the safety of labor, about its being a natural process, etc., there are yet the pains and perils which belong necessarily to it, and which all of your sex who bear children must inevitably, to a greater or less

extent, be subject to. I have not, I trust, heretofore, in my medical lifetime, been wholly unmindful of my duty as a physician, in endeavoring to instruct and to encourage your sex in these matters. But I have never wished to conceal my conviction that I regard pregnancy and childbirth as things of very serious moment in a woman's life; and he who can trifle with them is almost worse than a very fiend. Bear witness, then, I respectfully ask of all of you, that I, for one, have no sympathy with that nonsensical foolishness which would lead some people to tell you that pregnancy and childbirth are matters which need cause you no trouble, no agony, and no pain. I repeat, then, considering the truth in these things, it is not at all surprising that the pregnant woman should feel a good deal of concern in consequence of what she is to pass through.

But I must tell you also, that this mental solicitude is often increased to an unnecessary extent by the inadvertent remarks which are sometimes made respecting some unfavorable case. One tells of one sad accident, and one of another. Now all this is both unkind and unjust. Only place yourselves in the case of the pregnant woman. Would you like to have those strange and horrible stories told you, some of which may be true, and some not? Would you not rather that your sisters would speak to you, generally, at least, of pleasant occurrences, and of pleasant things? If they could not speak to you in a hopeful manner, certainly you would rather they would not speak to you at all.

Did you ever think of one of your sisters who is pregnant with an illegitimate child? If you who have kind husbands and kind friends to take care of you, become low-spirited in pregnancy, what must be the feelings of her who

knows that she must constantly be looked upon as an object of shame? What think you of her who has been led astray by the profligate from virtue's paths of pleasantness and peace? of her who is compelled to consider her pregnancy as a curse instead of a blessing, and who has, in addition to the troubles of this state, to bear up against the agony of her disappointed hopes, her sorrows, and her grief She must live in anticipation of a shame from which she can find no antidote, no retreat. How often, alas! has such a state of mind ended in a state of disease which has, in a short period, terminated life. Believe we that Jesus of Nazareth would treat such a one as we too often have done, when we know that He said, kindly and affectionately, to a woman who had been caught in the very act of adultery, "Go, AND SIN NO MORE!" Many a one has been thus disowned who might have been a loving mother and an affectionate companion through a long and happy life, and whose death-agonies were only the more embittered by the reflections of her fallen and deserted state.

In ordinary cases depression of the spirits is most apt to come on during the earlier months of gestation. Dr. Montgomery speaks of a curious fact connected with the state of mind in pregnant women, when their bodily health is at the same time good, namely, that however depressed or dispirited with gloomy forebodings they may have felt in the early part of their pregnancy, they in general gradually resume their natural cheerfulness as gestation advances; and a short time before labor actually commences, often feel their spirits rise, and their bodily activity increase to a degree they had not enjoyed for months before. This, however, does not always take place, for in some cases the despondency continues to the very end of the pe-

riod, at which time it generally disappears, but not until the pains of labor have actually commenced. With some, likewise, the despondency continues even after the labor has been passed through, and amounts almost to a fit of mental derangement.

Treatment.—It should always be remembered, that in most cases of the kind I have been considering, the state of health is not good. In some cases the deranged state of the body operates, doubtless, to depress the spirits and to derange the mental manifestations. In other cases the mind appears to become first affected, and afterward the body suffers in consequence thereof. In some cases, also, it is to be supposed that the action is reciprocal, and probably pretty fairly balanced between the two.

This explanation will enable us to form an opinion as to what the course of treatment should consist in, which is, as far as possible, to remove the causes of the difficulty.

In the slighter cases of mental depression a little improvement of the general health is often sufficient to work a radical change in the patient's feelings. In the more persistent cases we should do all in our power to tranquilize the mind and restore the bodily health.

LONGINGS.

Some women, when pregnant, experience the most strange and wayward desires in regard to particular articles of food. This sensation is what is commonly called *longing;* and it is believed that if the preternatural craving is not gratified, a *likeness* or *representation* of the article longed for is very apt to be impressed upon the child.

It is true that some writers of eminence—as Professor

Meigs, of Philadelphia, for example—have doubted the existence of any such sensation as the one in question; but the majority of writers are of the opposite opinion. Women also themselves—and they ought to be the best judges in a matter of this kind—do tell us that they know positively the truth of such a sensation as longing.

There are some remarkable facts on record concerning the symptoms which I am considering, and which would go to prove that it is not always the good things of this world that are longed for. If women were always in the habit of craving good and savory dishes under these circumstances, we should have some reason to suspect them of dishonesty in regard to the reality of longing; but when the fickle and morbid appetite is found often to crave the most unrelishable articles, we must admit the truth of the doctrine of which we are speaking.

A lady has been known, who, when not pregnant, having a great horror of eating eels, and yet when in this situation she has demanded them with an importunity not to be resisted. She would not only eat them with avidity, but in large and repeated quantities, for the first few months; she would then become indifferent to them, but not averse, until after her deli ery.

A woman pregnant, riding over a common, has scented spoiled shad that had been thrown out, and became instantly so fascinated by their odor, that she obliged her husband to take some of them into his gig; and as soon as she arrived at home, began to eat of them, raw as they were, and continued to do so daily until they were consumed, though they were extremely offensive to every body else in the house.

A woman pregnant, while passing through her kitchen,

has taken a disgusting piece of bacon boiling in a soap-kettle, out of the vessel, eating it afterward, with the greatest relish.

These are, it is true, extreme cases; but there are many which are far from being of a character so trifling as to warrant the conclusion that no such thing as longing for strange and disgusting articles during pregnancy exists. Indeed, the truth of the doctrine is so well understood among all classes as not to need any further proof.

Should these longings in pregnancy be gratified, and if so, to what extent? This is a question of great practical importance, and one which should be deeply pondered upon.

It is notorious, in the first place, that longing seldom, if ever, occurs in a woman of good health and a well-constituted mind. If we observe correctly, we shall find that it occurs seldom, if ever, in any other than delicate and nervously irritable women.

It occurs, in the second place, particularly among those who are indolent in their habits, having little or nothing to do, and without any wholesome object of thought or occupation with which to "kill time."

It occurs, in the third place, to those who have been in the habit of being pampered and indulged on every occasion. A woman who is continually in the habit of saying to her indulgent husband that she wants this, that, and the other thing, and if the good husband sees fit to gratify his interesting spouse in every thing which a morbid fancy can imagine, he will have business enough to kill his time, and a feeble, sickly wife in the bargain.

If this longing occurs only to the feeble and delicate, to the nervous, the indolent, and those who have been habit-

ually pampered, what, I ask, are we to do in the premises? Shall we gratify every whim of a nervous, unhealthy person, or shall we rather advise her to live on plain and wholesome food, at the same time directing her to occupy herself, body and mind, as a reasonable being should? It does not certainly require much common sense to enable one to settle this question as it should be.

But there are those among women who honestly believe that if their cravings are not satisfied in pregnancy, the child is very liable to become marked with an appearance like that of the article longed for.

The fallacy of this belief will at once be apparent, when it is considered how many cases of longing there are—cases, too, which are never gratified, while, at the same time, but very few children are ever found marked. The imagination can have no more effect here than in the cases of malformation, the absence or addition of a part, or in determining the color of a child. Hence a woman need not fear, as I have known them to do, that if their morbid appetite is not gratified in every particular, they are in danger of bringing forth a marked child. But more of this in another place.

Some physicians are of the opinion, it is true, that it is best to gratify longings to a certain extent. But suppose they are not gratified: the worst that can come is sickness at the stomach, nausea, and possibly vomiting—symptoms which, all of them, vanish soon enough, ordinarily, if the diet is made what it should be, in connection with good habits generally.

The truth is, that the mind itself is more disordered than the stomach in these cases. Hence an important consideration in the cure of it is, to provide the individual with some

useful and wholesome employment, which at the same time engages both the mind and body healthfully. At the same time the food should be of such a character as is best suited to a delicate state of the system, remembering always, that there is no period of life in which more care is necessary, in this respect, than in pregnancy.

But if, on the other hand, the preternatural craving is indulged, and the mind is left to prey upon itself, as it will without any suitable employment, the sensation will grow more and more persistent, and the fancy will be continually excited to produce new whims for its gratification, which, if answered, must necessarily be attended with detriment to both mother and child.

THE IMAGINATION.

Women are sometimes troubled about certain matters in pregnancy, which, if they had a proper knowledge on the subject, would cause them no mental disquietude whatever. Thus it is believed that the marks which sometimes appear on children, and continue through life, are to be attributed entirely to the workings of the mother's imagination during this period, and that even the color of the offspring may be determined by this circumstance alone.

The origin of this belief is, indeed, coeval with the history of the race. But antiquity alone is not a sufficient argument for any doctrine, no matter how old or how venerable a theory, if we know it to be disproved by the actual facts. If we were to take the antiquity of a doctrine or belief as the rule, and not have regard to reason and experience, there would be no end to error, and no improvement.

In the earliest period of medicine this delusion prevailed; and Hippocrates, honest and learned as he was, yet believed it, and aided in its propagation. Through his influence kings and nobles acted upon the principle, which, in some cases, at least, was made the cloak of wickedness and deception. Thus Hippocrates saved a noblewoman—and honestly, without doubt, though ignorantly—from the severity of the law, when she had given birth to a colored child, herself and husband both being white. He alleged that the darkness of its color was the effect of a picture of an Ethiopian that hung upon the wall in her chamber, and which was often the object of her contemplation. Galen was also of the opinion that a picture was sufficient, if contemplated with interest, to give a corresponding appearance to the fetus in utero; and Soranus declares that the tyrant Dionysius, who was deformed and ill-favored himself, employed the aid of beautiful pictures, with the hope that his wife might have comely issue. Cœlius Rhodius also mentions that Fabius Quintillian saved a woman from suspicion, after she had brought forth a negro child, by asserting that the circumstance arose from the fact of her taking great pleasure in viewing the picture of a black man in her apartment. From the prevalence of this belief it was, likewise, that Heliodorus formed the first, and, as is said, one of the most beautiful novels in the world, called the "Loves of Theagenes and Carachlea," the latter having been born white from black parents, but the queen, her mother, had often viewed, during her pregnancy, the picture of Andromeda, who was painted with a white face; and the sages attributed the white color of the child to the force of the mother's imagination.

This superstition—for it does not deserve a better name

—has probably always been believed in the world, and for a long time will continue to be by many, but not to that extent which it anciently was. We cannot believe, if cases like these, occurring in the time of Hippocrates and Quintillian, were to occur in our own day, and were now to be presented for judicial decision, that any judge or jury could be found so ignorant as to decide that the color of a child can be changed by force of the mother's imagination alone; but things scarcely less ridiculous and absurd are believed by almost every member of society who has any belief whatever on the subject. Thus it is now a matter of common belief, that the imagination of the mother may impose upon the skin certain resemblances to things upon which the fancy has been much employed, such as fruit, articles of food and drink, animals, insects, etc., or by the destruction of certain parts of the body, such as the head, arms or legs, lips, etc., or by the production of an additional part, as the fingers, toes, head, etc.

In order to settle this question satisfactorily, and beyond the possibility of mistake or doubt, it is well for us to look at the facts of nature as they exist everywhere about us, or, in other words, to the anatomy and physiology of the human body as it really is.

In regard to the anatomical connection between the mother and fetus, it is to be observed that it is altogether indirect, and is carried on only through the medium of the circulation. There is no nervous connection between mother and child; that is, no nervous filament, however small, has ever been detected passing from one to the other. "From this wise and all-important arrangement," observes Dr. Dewees, "it follows that the fetus is not

subject to the various and fluctuating condition of the sanguiferous, or to the never-ending changes of the nervous system of the mother; since no direct communication exists between her blood-vessels or nerves and those of the fetus, to impose upon it any alteration that may take place in her system, or to render the child liable, through the medium of nervous connection, to her affections." If the indirect connection that exists between the mother and child were better understood, and more justly appreciated, we should, doubtless, hear much less of the influence of the imagination of the mother upon the body of her infant, and thus one of the greatest of the attendant evils of pregnancy would be removed.

It is not to be denied that cases do occur in which there seems to be a hereditary predisposition to the perpetuation of supernumerary parts, marks, etc., in certain families; such as an additional thumb, finger, toe, or double teeth, in place of single; but such cases are not the result of any mental emotion, but are merely the effect of hereditary predisposition, the truth of which is admitted on all hands, and is a very different thing from that which we are now considering.

It has not been attempted, on the part of any, to determine at what precise period during pregnancy the imagination begins or ceases to have an influence upon the body of the child, but, according to the accounts given, every period is liable to the accidents or anomalies in question. The imagination, it is supposed, has the power, not only of causing the creation of a new part, but also of destroying one or more of the members of the body. Now, suppose a leg, an arm, or a toe, to be cast off, must it not be expelled from the womb? And who has ever detected

such an occurrence? Besides, too, is it to be supposed that nature would arrest the flow of blood after the part has been separated from the body of the fetus? There can be no doubt as to what is the truth in this matter.

Dr. Dewees mentions the case of a child that was born with but the stump of an arm, which, at the time of birth, was perfectly healed, or, rather, presented no evidence of ever having had a wound upon it at all. The mother declared that she had been frightened at the sixth month of pregnancy by a beggar. But what became of the lopped-off arm? and what arrested the bleeding? The child was born healthy and vigorous, and neither scar, wound, or blood could be discovered. In this case, as in all others of this kind, the "freak of nature" commenced at the first of gestation, the imagination of the mother having nothing to do with it.

The most learned and experienced medical men are all agreed on this subject. Dr. William Hunter, it is said, used to declare in his lectures, that he experimented in a lying-in-hospital upon two thousand cases of labor, to ascertain this point. His method was as follows: As soon as a woman was delivered, he inquired of her whether she had been disappointed in any object of her longing, and what that object was? If her answer were Yes, whether she had been surprised by any circumstance that had given her an unusual shock, and of what that consisted? Whether she had been alarmed by any object of an unsightly kind, and what was that object? Then, after making a note of each of the declarations of the woman, either in the affirmative or negative, he carefully examined the child; and he assured his class that he never, in a single instance of the two thousand, met with a coincidence. He met

with blemishes when no cause was acknowledged, and found none when it had been insisted on.

Dr. Hunter, however, confessed that he met with one case in his private practice that puzzled him; and he told his pupils he would merely relate the facts, and leave them to draw their own conclusions. A lady had been married several years without proving pregnant, but at last she had the satisfaction to announce to her husband that she was in that situation. The joy of the husband was excessive, nay, unbounded, and he immediately set about to qualify himself for the all-important duty of educating his long wished-for offspring. He read much, and had studied Martimus Scribelerus with great patience and supposed advantage, and had become a complete convert to the supposed influence of the imagination upon the fetus in utero. He accordingly acted upon this principle. He guarded his wife, as far as in him lay, against any contingency that might affect the child she carried. He therefore gratified all her longings most scrupulously; he never permitted her to exercise but in a close carriage, and carefully removed from her view all unsightly objects.

The term of gestation was at length completed, and the lady was safely delivered, by the skill of Dr. Hunter, of a living and healthy child; it had, however, one imperfection—it was a confirmed mulatto. On this discovery being made, the father was at first inexorable, and was only appeased by his dutiful and sympathizing wife calling to his recollection the huge, ugly negro that stood near the carriage door the last time she took an airing, and at whom she was severely frightened!

Dr. Dewees, whose experience in matters connected with the birth of children was probably as great as that of

any other individual, tells us that he commenced practice with the popular belief concerning the effect of the mother's imagination upon the physical condition of the child. But he had watched these things attentively for many years, and for the want of facts to substantiate the truth of the common belief, he was obliged to abandon it. He came to the conclusion that the imagination of the mother has no influence whatever upon the form or complexion of the fetus.

Fortunately, these absurd notions have long since been rejected by all sensible, observant, and intelligent physicians; and the fact that multitudes of those who are, or are to become mothers, do yet believe them, is the only reason for attempting a refutation of them. If we can but convince mothers of the fallacy of the belief we have been combating, we shall save them a great amount of anxiety and alarm. With many, who are not by any means to be classed among the "weak, ignorant, and superstitious" of females, every sudden or unexpected occurrence that happens to strike them with fear, or produces any strong mental emotion or excitement, is apt to impress them with alarming apprehensions as to the effects it may have on the development and conformation of the child in the womb. These ridiculous illusions, moreover, are often much increased by the strange stories respecting marks and malformations, occasioned, as is asserted, by the imagination of the mother; and these narratives always find their way among the credulous in society; for ignorant nurses, and gossiping idlers among the old women, are everywhere to be found, and all of them are well stocked with extraordinary examples of the pretended influence of which we are speaking. If a child is born with any spot or blemish

upon its body, or with any malformation whatever, forth with the mother is questioned as to the whole circumstances of the matter. If, at any time during pregnancy, any thing has attracted her attention, or strongly impressed the mind, which bears any resemblance or similitude to the mark, spot, blemish, or malformation of the child, it is at once put down as the certain cause of the defect. In this way these absurd apprehensions are often made to take so deep a hold upon the mind of pregnant females, that no expostulation or ridicule of the physician, or other friend, can entirely subdue them; and in some instances these apprehensions become so fixed as to cause a great degree of anxiety and distress of mind, and not unfrequently cause a great amount of physical suffering and ill health.

EFFECTS OF FRIGHT.

I have already remarked that the mind of the pregnant woman should be kept as calm, composed, and contented as possible during the pregnant state. In no respect is this advice more appropriate than in regard to the strong impressions of fear and every sudden emotion of an unpleasant kind.

Some of the most remarkable cases illustrative of the effects of fright in pregnancy, are given by Baron Percy, an eminent French surgeon, as having occurred at the siege of Landau, in 1793. It is stated that, in addition to a violent cannonading, which kept the women for some time in a constant state of alarm, the arsenal blew up with a terrific explosion, which few could listen to with unshaken nerves. Out of ninety-two children born in that district within a few months afterward, sixteen died at the instant

of birth; thirty-three languished for from eight to ten months, and then died; eight became idiotic and died before the age of five years; and two came into the world with numerous fractures of the bones of the limbs, caused by the cannonading and explosion! "Here, then," as Dr. Combe observes, "is a total of fifty-nine children out of ninety-two, or within a trifle of two out of every three, actually killed through the medium of the mother's alarm, and its natural consequences upon her own organization." Cases are recorded, in which the mother, being abruptly informed of the death of her husband, has suffered an immediate miscarriage in consequence. In some cases the child has survived, but has afterward, throughout life, been subject to great nervousness and liability to fear. James I., King of England, is said always to have had a constitutional aversion to a drawn sword and to any kind of danger, which was attributed to the constant anxiety and apprehension which his mother suffered during the period of gestation.

It will appear very plain to any one who is at all acquainted with this subject, that an impression which is powerful enough to cause such effects upon the child as the cases given by Baron Percy would indicate, must also act with detriment upon the mother. Indeed, it is only through the mother's organization that it is possible for the impression to be communicated to the child; and although the mother's life is not often actually destroyed under such circumstances, her nervous system may yet receive a shock which is sufficient to cause her life-long misery and ill health.

The practical lessons to be drawn from such facts are many, and, for the most part, easy to comprehend. They

teach us how important it is that a woman who is pregnant should, by all that is in her power, shun scenes of fear and danger. Husbands, and all who are in any way connected with her, should spare no pains in rendering this important and trying period of her life as happy and tranquil as the circumstances will allow. True, she should not make a *baby* of herself, or be *babied* by others; but, considering the liability to danger while in this condition, she should be careful of herself, in all respects, while passing through the period, and those about her should use all due caution in regard to it.

LETTER XX.

DRUG-TREATMENT IN PREGNANCY.

Effects of Blisters—Emetics—Purgative Medicines—Bleeding.

I could hope that not one of the large number of persons whom I address, would ever be subjected to any of the processes of drug-treatment in so critical a period as pregnancy. The water-treatment I regard as being so much safer, as well as more effectual, for the eradication of any and all the diseases to which you may be subject at this time, as well as others, that I should be very glad if I could say something to inspire you with a greater degree of confidence in the new method. But perhaps I am wrong; some of you, at least, have the fullest confidence in the sanative powers of water, and have no need of any thing more being said on that point. It is proper, however, that I say something here respecting the effects of certain drugs and drug-appliances, in this period.

BLISTERS.

It is the testimony of honest and capable practitioners, that these are far more liable to do harm in pregnancy than at other times.

Dr. Dewees asserts that he had known two cases of

abortion caused by the use of blisters, although he acknowledged they had, in some cases, been advantageously resorted to as a means of preventing that evil. But how, it may be asked, are physicians to know when to use them, and when not? This no man can tell. Nor have we any need of blistering at this or any time, because there are better means, which are entirely safe.

The same able author whom I just quoted, tells us that blisters are much more likely to produce strangury during pregnancy than in other cases; and that when this occurs, it is almost sure to be followed by the most distressing and untoward symptoms. Entire retention of urine sometimes follows the use of cantharides in these circumstances, which can only be relieved by the use of the catheter. There is also, at such times, not unfrequently so distressing an inclination and violence of effort to void urine, as to be surpassed only by the agony of labor itself. Bloody urine has sometimes followed the use of a blister; and a discharge of mucous from the internal surface of the bladder has continued, as a consequence, for a long time after. "It is true," observes a distinguished author, "these are extreme cases; but they nevertheless occur, and should, therefore, suggest a great deal of caution in their employment, especially in the more advanced periods of gestation."

EMETICS.

These are no more necessary in pregnancy than blisters. Severe vomiting is sometimes productive of abortion; and who is wise enough to foretell what may be the effect of a dose of tartar emetic given to a woman when in this highly impressible state? A single emetic has caused

severe and permanent pain, which has been removed only after parturition has taken place.

PURGATIVE MEDICINES.

That pregnant women do not bear purging so well as at other times, is a matter of common observation among medical men. There is in such practice a great liability of causing abortion, especially if it be carried too far. It is not difficult to account for the fact, when we remember how great is the sympathy which exists between the womb and the bowels.

If you should be obliged, any of you, under such circumstances, to be purged, I advise you to see to it that you know what medicines you take. Those particularly which have a powerful effect upon the bowels should be avoided; aloes, colocynth, scammony, and gamboge, should on no account be tolerated. These have a particular effect in exciting the lower part of the alimentary canal, causing tenesmus or a bearing-down pain in the rectum, which, by sympathy, is very liable to be communicated to the womb. This is shown by the fact that dysentery often causes miscarriage.

BLOOD-LETTING.

Not many years since, it was generally supposed that a woman could not pass through the period of pregnancy safely without being bled; and although a change has been wrought in the public mind in regard to this practice, there are yet many who labor under erroneous impressions in regard to this subject. There are those who regard it as indispensable to resort to this measure, notwith-

standing there may be no particular symptom that, under other circumstances, would be considered necessary to warrant a resort to the measure.

It must be admitted, however, that pregnancy is attended with a degree of fullness, and a tendency to plethora, which does not obtain in other states of the system. There is, indeed, always, during pregnancy, a greater liability to febrile and inflammatory diseases than is ordinarily experienced. But all this does not prove that blood-letting should be practiced in all, or in any considerable number of cases. Besides, also, it is doubted by many honest and able practitioners of the medical art, as to whether bleeding is ever, under *any* circumstances, necessary. There are others, too, who believe in the comparative necessity of blood-letting under certain conditions of the system, but who, at the same time, hold that there are better, safer, and more efficacious means of bringing about the required object. At all events, physicians very seldom, at the present day, resort to blood-letting during pregnancy, either in this country or the old; and in those rare cases in which this measure is resorted to, it is in answer only to indications of an imperative and decided nature.

Nor is the practice of blood-letting a comparatively harmless one, as many suppose it to be. "Why," it is said, "if it is not absolutely necessary, it can yet do me no harm." This is a poor recommendation of a remedy. If a remedy is not capable of doing harm under some circumstances, it would hardly be possible for it to do good at any time. The testimony of the strongest advocates for the practice is, *that blood-letting has frequently been known to do serious, and sometimes irreparable mischief, when practiced during the period of which we are speaking.*

Dr. Eberle gives the following good advice on this subject: "A very severe and troublesome pain is often experienced in the right hypochondrium during the latter period of pregnancy; and this suffering is, almost always, sought to be mitigated or removed by blood-letting. When decided evidences of plethora accompany this painful affection, bleeding will occasionally procure considerable relief; but in the majority of instances, no mitigation whatever is obtained from this measure. The relief which is sometimes procured by bleeding is always of short duration, the pain usually returning in the course of two or three days; and if the bleeding is thus frequently repeated, as is sometimes done, much mischief is apt to be produced by the general debility and languor which it tends to occasion. When the symptoms of vascular turgescence throughout the system are conspicuous in connection with this pain in the side, it will certainly be proper to diminish the mass of the circulating fluid by venesection; but when no indications of this kind are present, blood ought not to be abstracted, merely on account of this affection, for it will most assuredly fail of procuring the desired relief, and may, when not particularly called for, operate unfavorably on the general health of the patient. Moderation in diet, together with a proper attention to the state of the bowels, and the use of gentle exercise by walking, will, in general, do much more toward the removal of this source of uneasiness and suffering, than will result from blood-letting, when this evacuation is not specially indicated by the fullness and firmness of the pulse, or by other manifestations of general vascular plethora."

But in these cases, when so careful a practitioner as Dr. Eberle even, would think it best to resort to the lancet, it

is a well-attested fact, that fasting and prudent abstemiousness are far better, more effectual, and more permanent in their action upon the system than blood-letting. The *hunger-cure*, which I have so often for years past recommended, is a most valuable remedy in all plethora or over-fullness of the system, and in all kinds and degrees of pain arising from such fullness. See, too, how reasonable it looks; for the body, as you know, is always wasting itself, so that if we stop off the supply, the over-fullness must by a natural process very soon become cured; hence I say, do not be bled in pregnancy; and when you have need FAST.

LETTER XXI.

STERILITY OR BARRENNESS.

Their Causes—The Catamenial Discharge as affecting it—Fluor Albus—Corpulency—The Treatment appropriate in these Cases.

When a woman is not able to conceive, the defect must depend upon a malformation, a diseased state, or a diseased action of the generative organs.

Causes.—Organic barrenness happens in those cases where there is some structural hindrance or defect, either natural or accidental. The vagina may be imperforate, so as wholly to preclude the intermission of the seminal fluid; the ovaria may be either wholly wanting or too small; or the Fallopian tubes imperforate; or the uterus so small as not to be capable of its proper functions. The hymen may also be so hard and resisting as to prevent the natural measures for conception.

In most cases of barrenness, however, the organs of generation appear to be properly formed, but their action is imperfect or disordered.

If the menses have not appeared, or if the discharge is scanty, and occurs at irregular periods, the woman rarely conceives.

So also when the menstrual flux is more frequently repeated than it is in its natural course, or when it occurs even after the proper time, in too great profusion, and, as is gener-

ally the case, intermixed with genuine blood, there is little prospect of conception taking place. In such cases there often appears to be as little desire for cohabitation as there is power of fecundity.

Pregnancy seldom happens when the catamenial discharge is attended with great and spasmodic pain, particularly if the discharge is small in amount, and of deteriorated quality. If, under such circumstances, conception does take place, the next periodical flow is very apt to cause the uterus to discharge the germ, thus bringing on an early miscarriage.

The state of weakness and debility of the uterine system occasioned by too frequent sexual intercourse, is a common cause of sterility. Those unfortunate creatures who follow a life of prostitution seldom bear children.

Bad cases of fluor albus often indicate a state of the uterus and ovaries which does not admit of conception.

There is also to be mentioned, among the causes of barrenness, what has been called by medical writers *copulative incongruity*. "Every one," observes Dr. Good, "must have noticed occasional instances in which a husband and wife, apparently in sound health and vigor of life, have no increase while together, either of whom, nevertheless, upon the death of the other, has become the parent of a numerous family; and both of whom, in one or two curious instances of divorce, upon a second marriage. In various instances, indeed, the latent cause of sterility, whatever it consists in, seems gradually to diminish, and the pair that was years childless is at length endowed with a progeny."

Corpulency is also to be mentioned among the causes of barrenness. Women who are very fat are often sterile, from the fact that obesity is in reality a state of disease.

It is supposed by many that barrenness is almost always the fault of the female. But this is not necessarily so; the husband, as well as the wife, may be feeble in the procreative function; and men who have lived a debauched or dissipated life are very apt to be so. Hence it is that women are often blamed when they ought not to be.

Treatment.—In regard to the therapeutic management suitable to be adopted in such cases, it is to be remarked, that if organic disease is the cause of the difficulty, we cannot, as a general thing, expect by any means to effect a cure. But in a large majority of cases the difficulty is only a functional one; in many of these, therefore, a cure may be brought about.

The sum total of the therapeutic management proper to be adopted in such cases is, invigorating the general health. That which will best tend to fortify and strengthen the system generally is also best for the local weakness. Nor is a cure to be effected in a short period of time in most cases of sterility. It may require many months, and even years, to accomplish the object.

"Abstinence by consent for many months," observes Dr. Good, "has proved a more frequent remedy than any other, and especially when the intercourse has been so incessantly repeated as to break down the staminal strength; and hence the separation produced by a voyage to India has often proved successful."

Some years ago I wrote in my note-book the following paragraphs on this subject:

"A few months since, one of my patients, a gentleman of this city, informed me that a lady relative of his, with whom also I am acquainted, had been married about eight years, remaining, much to her sorrow, childless. She ex-

perienced frequent miscarriages, accompanied with much general debility. About two years since the subject of water-treatment came under her observation. She at once commenced a course of bathing, with due attention to regimen, etc. She became much improved, and, in due time, bore a healthy, well-formed child. She attributed this most desirable result to the effects of water in restoring her general health.

"Another lady remained without offspring for fifteen years after marriage. Her husband, in building a new house since the introduction of Croton water into this city, erected also convenient bathing fixtures. The lady practiced perseveringly a course of bathing, and became much improved in her bodily health. She, too, was at length blessed with an offspring, and, as she believed, in consequence of the course she had pursued in restoring her general health.

"I have known and heard of numbers of cases in which, by a prudent course of bathing, exercise, etc., the use of a plain and unstimulating diet, and the observing of proper temperance in the marital privileges, persons have borne children when most earnestly, and by a great variety of means, that object had been sought in vain. Yet be it ever remembered, that little is to be expected from either water or diet without *strict temperance in all things.*"

The vegetable diet, so called, is very favorable to reproduction in the human species. See how Ireland, a small island comparatively, sends its inhabitants all over Great Britain and the wide extent of the United States. Yet the mass of Irish people, as every one knows, subsist, while in their own country, mainly on potatoes and sour milk, or a diet equally simple. The celebrated Dr. Cheyne remark-

ed, from much experience, that the total milk and seed diet (meaning by seed, farinaceous substances generally), persevered in for two years, was in almost all cases sufficient to enable the barren to become pregnant by the appropriate means.

Fortify and invigorate the general health, observing at the same time the strictest "temperance in all things." These are the means by which to overcome that, to many, unfortunate state, barrenness.

You, then, who may be in the condition we have been considering, if you wish to be cured of it, leave none of the tonic means, none of the good rules of health untried. If you are faithful in every thing, so may you expect to succeed. But if it should be found that it is not possible for you to conceive, you will yet have the satisfaction of knowing that your toils have not been in vain; your health will become so much improved as to reward you a thousand-fold for every good thing you do.

I ought to remark also, before closing, that when a woman who has been for a time barren becomes again pregnant, she must be very careful of herself during this period, as with a little imprudence abortion is very likely to occur.

LETTER XXII.

THE PELVIS AND ITS ORGANS.

General Description—Differences between the Male and Female Pelvis—The Bladder and Urethra—The Vagina—The Uterus and its Appendages.

BEFORE entering upon the subject of labor and its phenomena, it is proper that I should give you some idea of the parts more immediately concerned in parturition. In doing this, I propose for the most part to adopt the plain and concise description of these structures given by Mr. Erasmus Wilson, of London, whose work on anatomy stands as high as any other that has ever been written.

THE PELVIS.

The pelvis, considered as a whole, is divisible into a *false* and *true* pelvis; the former is the expanded portion, bounded on each side by the ossa ilii, and separated from the true pelvis by the linea illopectinea. The true pelvis is all that portion which is situated beneath the ilio-pectinea. This line forms the margin or *brim* of the true pelvis, while the included area is called the *inlet*. The form of the inlet is heart-shaped, obtusely pointed in front at the symphysis pubis, expanded on each side, and encroached upon behind by a projection of the upper part of

the sacrum, which is named the promontory. The cavity is somewhat encroached upon at each side by a smooth quadrangular plane of bone, corresponding with the internal surface of the acetabulum, and leading to the spine of the ischium. In front are two fossæ around the obturator

A FEMALE PELVIS.

1. The last lumbar vertebra. 2, 2. The intervertebral substance connecting the last lumbar vertebra with the fourth and sacrum. 3. The promontory of the sacrum. 4. The anterior surface of the sacrum, on which its transverse lines and foramina are seen. 5. The tip of the coccyx. 6, 6. The iliac fossæ, forming the lateral boundaries of the false pelvis. 7. The anterior superior spinous process of the ilium; left side. 8. The anterior inferior spinous process. 9. The acetabulum. *a*. The notch of the acetabulum. *b*. The body of the ischium. *c*. Its tuberosity. *d*. The spine of the ischium seen through the obturator foramen. *e*. The os pubis. *f*. The symphysis pubis. *g*. The arch of the pubes. *h*. The angle of the os pubis. *i*. The spine of the pubes; the prominent ridge between *h* and *i* is the crest of the pubes. *k*, *k*. The pectineal line of the pubes. *l*, *l*. The ilio-pectineal line; *m*, *m*. The prolongation of this line to the promontory of the sacrum. The line represented by *h*, *i*, *k*, *k*, *l*, *l*, and *m*, *m*, is the brim of the true pelvis. *n*. The ilio-pectineal eminence. *o*. The smooth surface which supports the femoral vessels. *p*, *p*. The great sacro-ischiatic notch.

foramina, for lodging the obturator internus muscle, at each side. The inferior termination of the pelvis is very irregular, and is termed the *outlet*. It is bounded in front by the convergence of the rami of the ischium and pubes, which constitute the arch of the pubes; on each side by the tuberosity of the ischium, and by two irregular fissures formed by the greater and lesser sacro-ischiatic notches; and behind by the lateral borders of the sacrum, and by the coccyx.

The pelvis is placed obliquely with regard to the trunk of the body, so that the inner surface of the ossa pubis is directed upward, and would support the superincumbent weight of the viscera. The base of the sacrum rises nearly four inches above the level of the upper border of the symphysis pubis and the apex of the coccyx, somewhat more than half an inch above its lower border. If a line were carried through the central axis of the inlet, it would impinge by one extremity against the umbilicus, and by the other against the middle of the coccyx. The *axis of the inlet* is therefore directed *downward and backward*, while that of the *outlet* points *downward and forward*, and corresponds with a line drawn from the upper part of the sacrum, through the center of the outlet. The axis of the cavity represents a curve, which corresponds very nearly with the curve of the sacrum, the extremities being indicated by the central points of the inlet and outlet. A knowledge of the direction of these axes is most important to the surgeon, as indicating the line in which instruments should be used in operations upon the viscera of the pelvis, and the direction of force in the removal of calculi from the bladder; and to the accoucher, as explaining the course taken by the fetus during parturition.

There are certain striking differences between the male and female pelvis. In the male the bones are thicker, stronger, and more solid, and the cavity deeper and narrower. In the female the bones are lighter and more delicate, the iliac fossæ are large, and the ilia expanded; the inlet, the outlet, and the cavity, are large, and the acetabula farther removed from each other; the cavity is shallow, the tuberosities widely separated, the obturator foramina triangular, and the span of the pubic arch greater. The precise diameter of the inlet and outlet, and the depth of the cavity, are important considerations to the accoucher.

The contents of the pelvis are, the bladder, vagina, uterus with its appendages, and the rectum. Some portion of the small intestines also occupies the upper part of its cavity.

THE BLADDER.

This is in relation with the os pubis in front, with the uterus behind, from which it is usually separated by a convolution of small intestine, and with the neck of the uterus and vagina beneath. The form of the female bladder corresponds with that of the pelvis, being broad from side to side, and often bulging more on one side than on the other. This is particularly evident after frequent parturition. The *coats* of the bladder are the same as those of the male.

THE URETHRA.

This is about an inch and a half in length, and is lodged in the upper wall of the vagina in its course downward and forward, beneath the arch of the os pubis, to the mea-

tus urinarius. It is lined by mucous membrane, which is disposed in longitudinal folds, and is continuous internally with that of the bladder, and externally with the vulva; the mucous membrane is surrounded by a proper coat of elastic tissue, to which the muscular fibres of the detrusor urinæ are attached. It is to the elastic tissue that is due the remarkable dilatability of the female urethra, and its speedy return to its original diameter. The meatus is encircled by a ring of fibrous tissue, which prevents it from distending with the same facility as the rest of the canal; hence it is sometimes advantageous in performing this operation, to divide the margin of the meatus slightly with the knife.

THE VAGINA.

This is a membranous canal, leading from the vulva to the uterus, and corresponding in direction with the axis of the outlet of the pelvis. It is constricted at its commencement, but near the uterus becomes dilated, and is closed by the contact of the anterior with the posterior wall. Its length is variable; but it is always longer upon the posterior than upon the anterior wall, the former being usually about five or six inches in length, and the latter four or five. It is attached to the cervix of the uterus, which latter projects into the upper extremity of the canal.

In structure, the vagina is composed of a *mucous lining*, a layer of *erectile tissue*, and an external tunic of *contractile fibrous tissue*, resembling the dartos of the scrotum. The upper fourth of the posterior wall is covered, on its pelvic surface, by the peritoneum, while in front the peritoneum is reflected from the upper part of the cervix of the uterus to the posterior surface of the bladder. On each side it

gives attachment, superiorly to the broad ligaments of the uterus, and inferiorly to the pelvic fascia and levatores ani.

The mucous membrane presents a number of *transverse papillæ* or *rugæ*, upon its upper and lower surfaces, which extend outward on each side from a middle raphé. The transverse papillæ and raphé are more apparent upon the upper than upon the lower surface, and the two raphé are called the *columns of the vagina*. The mucous membrane is covered by a thin cuticular epithelium, which is continued from the labia, and terminates by a fringed border at about the middle of the cervix uteri.

The middle, or *erectile layer*, consists of erectile tissue enclosed between two layers of fibrous membrane; this layer is thickest near the commencement of the vagina, and becomes gradually thinner as it approaches the uterus.

The external, or *dartoid layer* of the vagina, serves to connect it to the surrounding viscera. Thus it is very closely adherent to the under surface of the bladder, and drags that organ down with it in prolapsus uteri. To the rectum it is less closely connected, and that intestine is therefore less frequently affected in prolapsus.

The uterus is a flattened organ, of a pyriform shape, having the base directed upward and forward, and the apex downward and backward in the line of the axis of the inlet of the pelvis, and forming a considerable angle with the course of the vagina. It is convex on its posterior surface, and somewhat flattened upon its anterior aspect. In the unimpregnated state it is about three inches in length, two in breadth across its broadest part, and one in thickness, and is divided into fundus, body, cervix, and os uteri. At the period of puberty, the uterus weighs about one ounce and a half; after parturition, from two to three

ounces; and at the ninth month of utero-gestation, from two to four pounds.

The *fundus* and *body* are inclosed in a duplicature of peritoneum, which is connected with the two sides of the pelvis, and forms a transverse septum between the bladder and rectum. The folds formed by this duplicature of peritoneum on either side of the organ are the *broad ligaments* of the uterus. The cervix is the lower portion of the organ; it is distinguished from the body by a well-marked constriction; to its upper part is attached the upper extremity of the vagina, and at its extremity is an opening, which is nearly round in the virgin, and transverse after parturition; the *os uteri*, bounded before and behind by two labia, the anterior labium being the most thick, and the posterior somewhat the longest. The opening of the os uteri is of considerable size, and is named the orificium uteri externum; the canal then becomes narrowed, and at the upper end of the cervix is constricted into a smaller opening, the orificium internum. At this point the canal of the cervix expands into the shallow triangular cavity of the uterus, the inferior angle corresponding with the orificium internum, and the two superior angles, which are funnel-shaped, and represent the original bicornute condition of the organ, with the commencement of the Fallopian tubes. In the canal of the cervix uteri are two or three longitudinal folds, to which numerous oblique folds converge, so as to give the idea of branches from the stem of a tree; hence this appearance has been denominated the *arbor vitæ uterina*. Between these folds, and around the os uteri, are numerous mucous follicles. It is the closure of the mouth of one of these follicles, and the subsequent distention of the follicle, with its proper secretion, that

occasion those vesicular appearances so often noticed within the mouth and cervix of the uterus, called the *ovula of Naboth.*

Structure.—The uterus is composed of three tunices: of an *external*, or *serous coat*, derived from the peritoneum, which constitutes the duplicatures on each side of the organ, called the broad ligaments; of a *middle*, or *muscular coat*, which gives thickness and bulk to the uterus; and of an *internal*, or *mucous membrane*, which lines its interior, and is continuous, on the other hand, with the mucous lining of the Fallopian tubes, and on the other with that of the vagina. In the unimpregnated state, the muscular coat is exceedingly condensed in texture, offers considerable resistance to section with the scalpel, and appears to be composed of whitish fibers, inextricably interlaced and intermingled with blood-vessels. In the impregnated uterus the fibers are of large size, and distinct, and are disposed in two layers, superficial and deep. The *superficial layer* consists of fibers, which pursue a vertical direction, some being longitudinal and others oblique. The longitudinal fibers are found principally upon the middle line, forming a thin plane upon the anterior and posterior face of the organ, and upon its fundus. The oblique fibers occupy chiefly the sides and fundus. At the angles of the uterus, the fibers of the superficial layer are continued outward upon the Fallopian tubes, and into the round ligaments and ligaments of the ovaries. The *deep layer* consists of two hollow cones of circular fibers, having their apex at the openings of the Fallopian tubes, and by their bases intermingling with each other on the body of the organ. These fibers are continuous with the deep muscular layer of the Fallopian tubes, and indicate the primitive

formation of the uterus by the blending of these two canals. Around the cervix uteri the muscular fibers assume a circular form, interlacing with and crossing each other at acute angles. The *mucous membrane* is provided with a columnar ciliated epithelium, which extends from the middle of the cervix uteri to the extremities of the Fallopian tubes.

Vessels and Nerves.—The *arteries* of the uterus are the uterine, from the internal iliac, and the spermatic, from the aorta. The *veins* are very large and remarkable; in the impregnated uterus they are called sinuses, and consist of canals, channeled through the substance of the organ, being merely lined by the internal membrane of the veins. They terminate on each side of the uterus in the uterine plexuses. The *lymphatics* terminate in the lumbar glands.

The *nerves* of the uterus are derived from the hypogastric and spermatic plexuses, and from the sacral plexus. They have been made the subject of special investigation by Dr. Robert Lee, who has successfully repaired the omission made by Dr. William Hunter, in this part of the anatomy of the organ. In his numerous dissections of the uterus, both in the unimpregnated and gravid state, Dr. Lee has made the discovery of several large nervous ganglia and plexuses. The principal of these, situated on each side of the cervix uteri, immediately behind the ureter, he terms the *hypogastric ganglion;* it receives the greater number of the nerves of the hypogastric and sacral plexus, and distributes branches to the uterus vagina, bladder, and rectum. Of the branches to the uterus, a large fasciculus proceeds upward by the side of the organ, toward its angle, where they communicate with branches of the spermatic plexus, and form another large ganglion,

which he designates the spermatic ganglion, and which supplies the fundus uteri. Besides these, Dr. Lee describes *vesical* and *vagina ganglia*, and interior and posterior *sub-peritoneal ganglia*, and *plexuses*, which communicate with the preceding, and constitute an extensive nervous rete over the entire uterus. Dr. Lee concludes his observations by remarking: "These dissections prove that the human uterus possesses a great system of nerves, which enlarges the coats, blood-vessels, and absorbents during pregnancy, which returns, after parturition, to its original condition before conception takes place. It is chiefly by the influence of these nerves that the uterus performs the varied functions of menstruation, conception, and parturition, and it is solely by their means that the whole fabric of the nervous system sympathizes with the different morbid affections of the uterus. If these nerves of the uterus could not be demonstrated, its physiology and pathology would be completely inexplicable."

APPENDAGES OF THE UTERUS.

The appendages of the uterus are inclosed by the lateral duplicatures of peritoneum, called the broad ligaments. They are the Fallopian tubes and ovaries.

The *Fallopian tubes* or *oviducts*—the uterine trumpets of the French writers—are situated in the upper border of the broad ligaments, and are connected with the superior angles of the uterus. They are somewhat trumpet-shaped, being much smaller at the uterine than at the free extremity, and narrower in the middle than at either end. Each tube is about four or five inches in length, and more or less flexuous in its course. The canal of the Fallopian

tube is exceedingly minute; its inner extremity opens by means of the ostium uterinum into the upper angle of the cavity of the uterus, and the opposite end into the cavity

VISCERA OF THE FEMALE PELVIS.

1. The symphysis pubis; to the upper part of which the tendon of the rectus muscle is attached. 2. The abdominal parietes. 3. The collection of fat, forming the projection of the mons Veneris. 4. The urinary bladder. 5. The entrance of the left ureter. 6. The canal of the urethra, converted into a mere fissure by the contraction of its walls. 7. The meatus urinarius. 8. The clitoris, with its prepuce, divided through the middle. 9. The left nymphæ. 10. The left labium majus. 11. The meatus of the vagina, narrowed by the contraction of its sphincter. 12. The canal of the vagina, upon which the transverse rugæ are apparent. 13. The thick wall of separation between the base of the bladder and the vagina. 14. The wall of separation between the vagina and rectum. 15. The perineum. 16. The os uteri. 17. Its cervix. 18. The fundus uteri. The cavitas uteri is seen along the center of the organ. 19. The rectum, showing the disposition of its mucous membrane. 20. The anus. 21. The upper part of the rectum, invested by the peritoneum. 22. The recto-uterine fold of the peritoneum. 23. The utero-vesical fold. 24. The reflexion of the peritoneum, from the apex of the bladder upon the urachus to the internal surface of the abdominal parietes. 25. The last lumbar vertebra. 26. The sacrum. 27. The coccyx.

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extending from the upper angles of the uterus, and along the spermatic canals to the labia majora, in which they are lost. They are accompanied by a small artery, by several filaments of the spermatic plexus of nerves, and by a plexus of veins. The latter occasionally become varicose, and form a small tumor at the external abdominal ring, which has been mistaken for inguinal hernia. The round ligaments serve to retain the uterus in its proper position in the pelvis, and during utero-gestation to draw the anterior surface of the organ against the abdominal parietes.

LETTER XXIII.

ANATOMY OF THE FETUS.

Its Length and Weight—Its Osseous, Muscular, and Vascular Systems—The Fetal Circulation—Nervous System—Organs of Sense—Its Lungs, Heart, and other Internal Organs.

As a matter of natural science, rather than one of real practical utility, to you for whom I write these letters, I present you with a description of some of the more important characteristics of the fetus. In doing this I acknowledge myself indebted to Mr. Wilson, the distinguished anatomist before referred to.

The medium weight of a child of the full period, at birth, is seven pounds, and its length seventeen inches; the extremes of weight are four pounds and three quarters, and ten pounds; and the extremes of measurement fifteen and twenty inches. The head is of large size, and lengthened from before backward; the face small. The upper extremities are greatly developed, and the thorax expanded and full. The upper part of the abdomen is large, from the great size of the liver; the lower part is small and conical; and the lower extremities are very small in proportion to the rest of the body. The external genital organs are very large, and fully developed, and the attachment of the umbilicus is one inch farther from the vertex

of the head than from the soles of the feet; and one inch farther from the ensiform cartilage than from the symphysis pubis.

OSSEOUS SYSTEM.

The development of the osseous system is treated of in the various works on anatomy. The ligamentous system presents no peculiarity deserving of remark.

MUSCULAR SYSTEM.

The muscles of the fetus at birth are large and fully formed; they are of a lighter color than those of the adult, and of softer texture. The transverse striæ on the fibers of animal life are not distinguishable until the sixth month of fetal life.

VASCULAR SYSTEM.

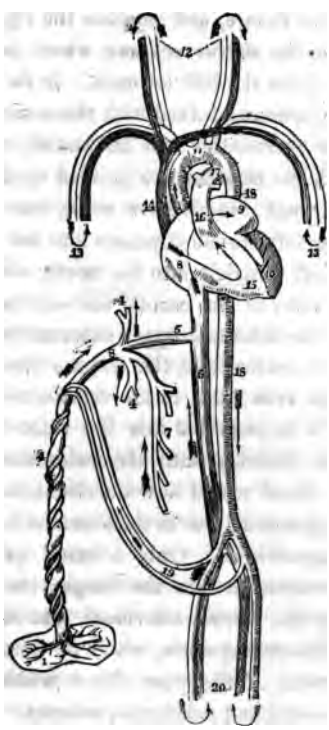
The circulating system presents several peculiarities: 1st. In the heart; there is a communication between the two auricles by means of the *foramen ovale*. 2d. In the arterial system; there is a communication between the pulmonary artery and descending aorta, by means of a large trunk, the *ductus arteriosus*. 3d. Also in the arterial system; the internal iliac arteries, under the name of *hypogastric* and *umbilical*, are continued from the fetus to the placenta, to which they return the blood which has circulated in the system of the fetus. 4th. In the venous system; there is a communication between the umbilical vein and the inferior vena cava, called the *ductus venosus*.

FETAL CIRCULATION.

The pure blood is brought from the placenta by the *umbilical vein*. The umbilical vein passes through the umbilicus, and enters the liver, where it divides into several branches, which may be arranged under three heads: 1st. Two or three, which are distributed to the left lobe. 2d. A single branch, which communicates with the portal vein in the transverse fissure, and supplies the right lobe. 3d. A large branch, the *ductus venosus*, which passes directly backward, and joins the inferior cava. In the inferior cava the pure blood becomes mixed with that which is returning from the lower extremities and abdominal viscera, and is carried through the right auricle (guided by the Eustachian valve), and through the *foramen ovale*, into the left auricle. From the left auricle it passes into the left ventricle, and from the left ventricle into the aorta, whence it is distributed, by means of the carotid and subclavian arteries, principally to the head and upper extremities. From the head and upper extremities, the impure blood is returned by the superior vena cava to the right auricle; from the right auricle, it is propelled into the right ventricle; and from the right ventricle into the pulmonary artery. In the adult, the blood would now be circulated through the lungs, and oxygenated; but in the fetus the lungs are solid, and almost impervious. Only a small quantity of the blood passes therefore into the lungs; the greater part rushes through the *ductus arteriosus*, into the commencement of the descending aorta, where it becomes mingled with that portion of the pure blood which is not sent through the carotid and subclavian arteries.

Passing along the aorta, a small quantity of this mixed

blood is distributed by the external iliac arteries to the lower extremities; the greater portion is conveyed by the internal iliac, hypogastric, and umbilical arteries to the placenta; the hypogastric arteries proceeding from the internal iliacs, and passing by the side of the fundus of the bladder, and upward along the anterior wall of the abdomen to the umbilicus, where they become the umbilical arteries.



FETAL CIRCULATION.

1. The umbilical cord, consisting of the umbilical vein and two umbilical arteries; proceeding from the placenta (2). 3. The umbilical vein dividing into three branches; two (4, 4), to be distributed to the liver; and one (5), the ductus venosus, which enters the inferior vena cava (6). 7. The portal vein, returning the blood from the intestines, and uniting with the right hepatic branch. 8. The right auricle; the course of the blood is denoted by the arrow, proceeding from 8 to 9, the left auricle. 10. The left ventricle; the blood following the arrow to the arch of the aorta (11), to be distributed through the branches given off by the arch to the head and upper extremities. The arrows 12 and 13, represent the return of the blood from the head and upper extremities through the jugular and subclavian veins, to the superior vena cava (14), to the right auricle (8), and in the course of the arrow through the right ventricle (15), to the pulmonary artery (16). 17. The ductus arteriosus, which appears to be a proper continuation of the pulmonary artery, the offsets at each side are the right and left pulmonary artery cut off; these are of extremely small size as compared with the ductus arteriosus. The ductus arteriosus joins the descending aorta (18, 18), which divides into the common iliacs, and these into the internal iliacs, which become the hypogastric arteries (19), and return the blood along the umbilical cord to the placenta; while the other divisions, the external iliacs (20), are continued into the lower extremities. The arrows at the terminations of these vessels mark the return of the venous blood by the veins to the inferior cava.

NERVOUS SYSTEM.

The brain is very soft, almost pulpy, and has a reddish tint throughout; its weight at birth, relatively to the entire body, is as 1 to 6, and the difference between the white and gray substance is not well marked. The nerves are firm and well developed.

ORGANS OF SENSE.

Eye.—The eyeballs are of large size, and well developed at birth. The pupil is closed by a vascular membrane called the *membrana pupillaris*, which disappears at about the seventh month. Sometimes it remains permanently, and produces blindness. It consists of two thin membranous layers, between which the ciliary arteries are

prolonged from the edge of the iris, and form arches and loops by returning to it again, without anastomosing with those of the opposite side.

The removal of the membrane takes place by the contraction of these arches and loops toward the edge of the pupil. The capsule of the lens is extremely vascular.

Ear.—The ear is remarkable for its early development; the labyrinth and ossicula auditûs are ossified at an early period, and the latter are completely formed before birth. The only parts remaining incomplete are the mastoid cells, and the meatus auditorius. The membrana tympani in the fetal head is very oblique, occupying almost the basilar surface of the skull; hence, probably, arises a deficient acuteness in the perception of sound. It is also extremely vascular.

Nose.—The sense of smell is imperfect in the infant, as may be inferred from the small capacity of the nasal fossæ, and the non-development of the ethmoid, sphenoid, frontal, and maxillary sinuses.

FETAL LUNGS.

The *lungs*, previously to the act of inspiration, are dense and solid in structure, and of a deep-red color. Their specific gravity is greater than water, in which they sink to the bottom; whereas lung which has respired will float upon that fluid. The specific gravity is, however, no test of the real weight of the lung, the respired lung being actually heavier than the fetal. Thus the weight of the fetal lung, at about the middle period of uterine life, is to the weight of the body as 1 to 60. But, after respiration, the relative weight of the lung to the entire body is as 1 to 30.

FETAL HEART.

The *heart* of the fetus is large in proportion to the size of the body; it is also developed very early, representing at first a simple vessel, and undergoing various degrees of complication until it arrives at the compound character which it presents after birth. The two ventricles form, at one period, a single cavity, which is afterward divided into two by the septum ventriculorum. The two auricles communicate up to the moment of birth, the septum being incomplete, and leaving a large opening between them, the *foramen ovale* (foramen of Botal).

The *ductus arteriosus* is another peculiarity of the fetus connected with the heart; it is a communication between the pulmonary artery and the aorta. It degenerates into a fibrous cord after birth, from the double cause of a diversion in the current of the blood toward the lungs, and from the pressure of the left bronchus, caused by its distention with air.

VISCERA OF THE ABDOMEN.

At an early period of uterine life, and sometimes at the period of birth, as Dr. Wilson observed in the imperfectly-developed fetus, two minute fibrous threads may be seen passing from the umbilicus to the mesentery. These are the remains of the omphalo-mesenteric vessels.

The *omphalo-mesenteric* are the first-developed vessels of the germ; they ramify upon the vesicula umbilicalis, or yolk-bag, and supply the newly-formed alimentary canal of the embryo. From them, as from a center, the general circulating system is produced. After the establish-

ment of the placental circulation they cease to carry blood, and dwindle to the size of mere threads, which may be easily demonstrated in the early periods of uterine life; but are completely removed, excepting under peculiar circumstances, at a later period.

The *stomach* is of small size, and the great extremity but little developed. It is also more vertical in direction the earlier it is examined, a position that would seem due to the enormous magnitude of the liver, and particularly of its left lobe.

The *appendix vermiformis cæci* is long and of large size, and is continued directly from the central part of the cul-de-sac of the cæcum, of which it appears to be a constricted continuation. This is the character of the appendix cæci in the higher quadrumana.

The large intestines are filled with a dark-green, viscous secretion, called *meconium*, from its resemblance to the inspissated juice of the poppy.

The *pancreas* is comparatively larger in the fetus than in the adult.

The *spleen* is comparatively smaller in the fetus than in the adult.

FETAL LIVER.

The *liver* is the first-formed organ in the embryo. It is developed from the alimentary canal, and at about the third week fills the whole abdomen, and is one half the weight of the entire embryo. At the fourth month the liver is of immense size in proportion to the bulk of the fetus. At birth it is of very large size, and occupies the whole upper part of the abdomen. The left lobe is as large as the right, and the falciform ligament corresponds with the

middle line of the body. The liver diminishes rapidly after birth, probably from obliteration of the umbilical vein.

KIDNEYS AND SUPRA-RENAL CAPSULES.

The *kidneys* present a lobulated appearance in the fetus, which is their permanent type among some animals, as the bear, the otter, and cetacea.

The *supra-renal capsules* are organs which appear, from their early and considerable development, to belong especially to the economy of the fetus. They are distinctly formed at the second month of embryonic life, and are greater in size and weight than the kidneys. At the third or fourth month, they are equaled in bulk by the kidneys; and at birth, they are about one third less than those organs.

VISCERA OF THE PELVIS.

The *bladder* in the fetus is long and conical, and is situated altogether above the upper border of the ossa pubis, which are as yet small and undeveloped. It is, indeed, an abdominal viscus, and is connected superiorly with a fibrous cord, called the *urachus*, of which it appears to be an expansion.

The *urachus* is continued upward to the umbilicus, and becomes connected with the umbilical cord. In animals it is a pervious duct, and is continuous with one of the membranes of the embryo, the *allantois*. It has been found pervious in the human fetus, and the urine has been passed through the umbilicus. Calculous concretions have also been found in its course.

The *uterus*, in the early periods of embryonic exist-

ence, appears bifid, from the large size of the Fallopian tubes, and the small development of the body of the organ. At the end of the fourth month, the body assumes a larger bulk, and the bifid appearance is lost. The cervix uteri in the fetus is larger than the body of the organ.

LETTER XXIV.

PHENOMENA OF LABOR.

Meaning of the Term—Its Divisions—Duration—Is Pain a Natural Condition of Labor?—Ether and Chloroform.

HAVING, in the preceding letters, spoken of the various conditions of pregnancy, I propose now making some remarks on the subject of labor.

I use the term *labor* in the medical sense, which means the same thing as *delivery*, or that process of nature by which the fetus, the secundinus or membranes, and the placenta or after-birth, are brought into the world.

In order to give you clearer ideas respecting labors, it is proper that I should say something in regard to the different kinds that may occur. On this subject authors have varied somewhat; some having divided labors into few classes, while others have designated many. But first, a few remarks on the *cause* of labor.

I have remarked in another place, that among women the natural term of utero-gestation is forty weeks, or nine calendar months. Occasionally, it is true, the expulsory process commences within this period, or in other cases extends beyond it; but on the whole, it happens so nearly at this period, that we are compelled to conclude that it must be under the influence of some particular agency, the nature of which we can in no wise comprehend.

Some have maintained that it is the weight of the child, forcing it downward at this precise period, which causes it to be expelled. Others have supposed that the uterus contracts at the end of the forty weeks, merely because it has no power of further expansion.

Others again have ascribed labor to the increasing activity of the child and the uneasiness caused by its movements. But all of these hypotheses are proved fallacious by the facts, that a large or small child is born at the same period even with the same woman, and that a dead child, unless the death took place at a very early part of the pregnancy, is born in the same manner, and with the same punctuality as to period, as a live one. "No fact," says Dr. Denman, "is more incontestibly proved, than that a dead child, even though it may have become putrid, is commonly born after a labor as regular and natural in every part of the process, as a living one." We can, therefore, only state, that parturition comes on at a stated period, in consequence of a law of nature, or, in other words, as Avicenna remarks, "at the appointed time labor comes on by the command of God."

DIVISIONS OF LABOR.

Dr. Conquest has disposed of labors in the following manner:

"The division of labors originally made by Hippocrates into: 1st. Natural; 2d. Preternatural, is sufficiently comprehensive, while it forcibly recommends itself by its simplicity and perspicuity. Natural labor supposes four things: 1st. That the vertex presents; 2d. That there is sufficient room in the pelvis to admit of the ready

descent of the head of the child in that direction which permits the occiput to emerge under the arch of the pubis; 3d. That there is parturient energy adequate to the expulsion of the contents of the uterus without manual interference, and without danger either to the mother or child; and, 4th. That the process of parturition is completed within a moderate time.

"Preternatural labor embraces all the varieties not comprehended in the class of natural labor, whether they respect difficulty, duration, or danger, and may be included in the following six orders: 1st. Protracted labors; 2d. Those labors in which any other part than the head may present; such as the breech, feet, hands, penis, etc.; 3d. Labors with a plurality of children; 4th. Labors attended with convulsions; 5th. Labors with uterine hemorrhage. 6th. Labors in which laceration of the uterus or contiguous parts may occur."

Dr. Denman's division of labors is probably as good as any one, and has the recommendation of being simple and easy to comprehend. It consists of the following classes: 1. Natural; 2. Difficult; 3. Preternatural; 4. Anomalous.

Under one or other of these distinctions, every kind of labor which can occur, is to be placed.

Natural labor "is that which consists in a gradual enlargement of the mouth of the womb, and the diametus of the vagina, so as to suffer the child to pass away when urged from above by a repetition of expulsatory contractions of the uterus and all the surrounding muscles." This kind of labor is by far the most frequent, and indeed takes its name from its frequency; and in the great majority of labors there is no danger however painful and distressing they may be. Natural labor lasts usually from

two to twelve hours, seldom happening sooner than the first or later than the last. Dr. Good places the average at about six hours. If I were to speak of the average duration of labor from memory, in regard to the cases which I have attended, I should consider that six hours was too low a number, and should think that eight or ten would be a nearer approximation to it.

Dr. Maunsel, of Dublin, has given the records of 839 cases of labor which occurred in the Wellesley Institution. In these,

347	terminated in	6	hours.	37	terminated in	48	hours.
300	"	12	"	8	"	56	"
87	"	18	"	5	"	60	"
59	"	24	"	1	"	72	"

IS PAIN A NATURAL CONDITION OF LABOR?

I am here led to make a digression on the subject of pain. There are some nowadays who contend that labor is naturally a painless process, and that through the voluntary habits of the individual it is possible to make it so even at the present day.

I must humbly dissent from this doctrine. I am willing to admit, or, rather, I do emphatically affirm, that the safety of parturition, the ability to pass with comparative comfort through the period of pregnancy, and the recovery from childbirth, are very much under the influence of the voluntary habits of the individual, and may be modified to an almost indefinite extent. If I did not believe all this most fully, I would never have written these letters, and probably not have practiced the healing art. But all this is a very different thing from that of bringing forth a child without pain.

I do not care even if some of your sex who have borne children, too, should themselves tell me that they passed through labor without experiencing any suffering whatever. I could hardly trust their word if they should tell me so, because I know too well that they may deceive themselves, and that it is a matter of striking benevolence in the Creator, who has formed woman's nature in such a way that she soon forgets the agony after it has passed. How many of you all to whom I address myself would ever consent to bring forth a second child, if there should always be present in your minds the consciousness of the agony, not to say the pain, the real agony, which labor actually cost you?

See, too, the animals which we hear so much about. Some will tell you that they do not suffer when they bring forth their young. But I say to you these pretended philosophers do not know of what they affirm. Take the healthiest animals—not the sickly, stall-fed ones of our cities, but those of the country—and such as never manifested any signs of sickness whatever; do they not suffer pain when they bring forth? I speak from a knowledge of the facts when I tell you they do. They sometimes even die in the process, and they *always* manifest signs of distress, even as a premonitory symptom when labor is about to come on. How, indeed, could there be such a displacement of living, vital parts as occurs in a labor without there being pain? As to *danger*, that is another thing.

I would, therefore, not have you carried away with that foolish notion, which some would instill into your minds, that labor can be without pain. I trust I have said and shall say some things in these pages which will go to en

courage you somewhat in reference to childbirth; but all along my desire is to tell you the truth. It is better for you that you should know it, and for me that I should speak it. *We ought never to be afraid of the truth.*

But perhaps some of you are ready to ask, what is the meaning of that passage of Scripture which reads:

"Unto the woman God said, I will greatly multiply thy sorrow and thy conception; in sorrow shalt thou bring forth children; and thy desire shall be to thy husband, and he shall rule over thee."

I can tell you what I think it does *not* mean, which is, that the Almighty did not order that human beings should have no agency in regard to the pains and perils of childbirth. He did not say, that if a woman chooses, when pregnant, to go to balls, parties, theaters, and the like places, become excited, and, for example, dance, that she could not thus, of her own voluntary acts, bring on abortion or some worse ailment. He did not order, that if she will persist in drinking tea and coffee, that her nerves will not be injured thereby. And so of all other rules of health. If we obey God's physiological laws, health will be better in proportion to the extent of that obedience; if we disobey them, we must inevitably suffer in consequence thereof. Nor is there any thing in the Word of God, when rightly understood, which at all conflicts with this doctrine.

ETHER AND CHLOROFORM.

Holding, as I do, that pain is a natural condition of the puerperal state, you can understand why it is that I am opposed to the use of ether and chloroform under such cir-

cumstances. We ought never to counteract a law of nature. If we do, we are certain of being injured to a greater or less degree; and it is no wonder at all to me that people sometimes lose their lives in the use of these anesthetic agents. The only wonder is that they do not oftener sink under them. I am not now saying that I would never recommend even the risk of using chloroform, but only that I would not recommend it in labor, because that is a natural process, and one which should not be unnecessarily interfered with by art.

LETTER XXV.

MANAGEMENT OF LABOR.

Its Premonitory Signs—Progress of Labor—Its Different Stages—Age as Affecting it.

It is very common for women to experience a manifest improvement in all their symptoms some days before labor is about to come on.

Some days previous to its commencement, a remarkable subsidence of the abdomen and diminution in the size of the body takes place. This is occasioned by the sinking of the womb, and, of course, its contents with it move into the brim of the pelvis. It is possible, likewise, that the walls of the uterus begin at this time to bring themselves into closer contact with the child, thus rendering the abdomen somewhat smaller. At all events we know, that the fact does occur in most cases, and the circumstance is always to be looked upon as a favorable one.

Just before labor a sort of general distress arises in the patient's mind, owing, no doubt, in part, to the state of the body, and in part to the natural apprehensions of pain and the danger which she is to pass through. "This," as Dr. Denman observes, "does not seem to be confined to the human species, but to be common to all creatures, as they universally show signs of dejection and misery at

this time, though they suffer in silence; and even those animals which are domesticated, strive to conceal themselves, and refuse all offers of assistance."

STAGES OF LABOR.

Labor may be appropriately divided into three stages, which are the following:

1. That which includes "all the circumstances which occur, and all the changes made, from the commencement of the labor to the complete dilatation of the os uteri (mouth of the uterus), the rupture of the membranes, and the discharge of the waters."

2. This stage includes those circumstances which occur between the first stage and the expulsion of the child.

3. The third stage includes all that relates to the separation and expulsion of the placenta or after-birth.

As labor is about to come on, and even for some days previously to it, an increased mucous discharge takes place from the vagina, which for a day or two at the last is apt to become streaked with blood, forming what is termed the *show*. This arises from a partial detachment of the placenta, at which time it might perhaps with propriety be considered that labor had actually commenced, although in a slight degree.

This show, however, does not always appear, for, as Dr. Denman observes, "in many cases there is no colored discharge in any period of the labor, and then the dilatation proceeds more slowly; for the discharge is not only a sign that the parts are in a state disposed to dilate, but it also improves that state."

If the bladder is at all irritable, the woman at this time

suffers from strangury, more or less. This is in consequence of the pressure of the womb upon the neck of the bladder, or upon the urethra. If the rectum is in a similar condition, there is apt to be tenesmus, or a bearing-down feeling at the lower bowel, as if something should be discharged, but which the woman is not able to accomplish. All these are common symptoms; but in some cases labor begins, as it were, suddenly, without any warning whatever.

Not unfrequently, in the beginning of a labor, the woman experiences one or several rigors, which may be in connection with or without a sense of cold. These are supposed to arise in consequence of the system rallying its energies to concentrate them upon one important object, namely, that of effecting the dilatation of the uterus and the expulsion of the fetus. They are evidently not attended with any danger, and should therefore give the patient no alarm.

State of the Bowels.—It is not uncommon for patients to have one or more loose discharges from the bowels at the beginning of or during labor. This symptom occurs in consequence of the sympathy that exists between the womb and the lower part of the alimentary tract. There appears to be in the minds of most women a great prejudice against bowel complaints through the different stages of pregnancy, and at the time of labor, and, as a consequence, there is a willingness, and often anxiety, on their part to use such means as are supposed to have an effect in suppressing them. But in most cases of diarrhea under these circumstances, the patient is relieved by it rather than made worse, and should therefore take no special means of counteracting it, unless, indeed, under the guidance of a medical attendant who should deem such a course necessary.

Nature of the Pains.—It is an object to know how you may distinguish between the true pains of labor and those which are false.

The true pains of labor usually begin in the back and loins, and shoot round to the upper part of the thighs; or they may commence first in the lower part of the abdomen, as if in the region of the bladder, passing backward toward the spine. Some women commence being sick, as if they had eaten something that disagreed with them; and I have repeatedly known them to attribute the pains of the commencement of labor to this cause. A little time in such cases is sufficient to convince them of their error.

Periodicity is, in most cases, a symptom showing that the pains are not false. The interval between them may vary in different cases from one minute to thirty, forty, or more, according to the action of the uterus, on which they depend. The more the pains are multiplied the better it is to be regarded for the patient, and for the reason, that if an effort of great importance to the constitution is to be produced, the more slowly and gradually it is done the better, if the slowness is not the effect of disease. A sudden and violent labor is never to be looked upon as being so safe as one which happens in a more gradual manner. "It is an old observation," says Dr. Denman, "confirmed by daily experience, that after the completion of slow or lingering labors, patients usually recover better than after those which are quick; not to mention that they are less liable to the untoward accidents which precipitation may immediately produce."

A considerable difference exists in the character of the pains, according to the stage of labor in which tney occur.

The earlier pains are termed cutting or grinding, from the fact that uterine fibers alone are principally concerned in them. Afterward the pains get to be lower down, and are of a more bearing-down nature. When these pains exist, the woman is instinctively led to bring her abdominal muscles into powerful action, causing her, at the same time, to hold in her breath, so that after the pain has ceased, or partially so, she utters a deep groan. In the earlier part of the labor, the cries are more shrill, so that an experienced observer will often be able to judge of the stage of the labor merely by hearing the manifestations made. In some cases, however, the patient does not exhibit any of the aforementioned signs of distress, until the moment when the child is about to pass into the world. She is then obliged to put forth an expression of agony, which proves but too well how much it is her lot to endure.

THE LIQUOR AMNII, OR WATERS.

In order that you may the better understand the first stage of labor, I will here make some remarks on the nature and office of the fluid above-named. By *liquor amnii*, or *waters*, is meant that fluid which is contained within the membranes surrounding the child.

The quantity of the waters, when compared with the size of the child, is greater in the earlier parts of pregnancy. At the time of labor it is found to vary a good deal in different cases, amounting in some to four or five pints, and in others to scarcely as many ounces. It is thought to be largest in case the child has been for some time dead, as also when it is very feeble.

In regard to the office of this fluid, some have imagined

that the fetus is nourished by it, the liquor being swallowed into the stomach. But in answer to this doctrine, it is to be remarked, that there are many examples of children having been born without any passage to this organ. There have also been born children of a full size and well-formed shape, all except the head, which was wanting. These facts make it clear that the child must be nourished in some other way than by the waters surrounding it.

Some also have supposed this fluid to be an excrementitious substance; but this belief is not now generally adopted, or rather, no physiologist of any eminence regards it as such at the present day.

The liquor amnii "is generally transparent, often milky, and sometimes of a yellow or light-brown color, and very different in consistence; and these alterations seem to depend upon the state of the constitution of the parent. It does not coagulate with heat, like the serum of the blood; and chemically examined, it is found to be composed of phlegm, earthy matter, and sea-salt, in different proportions in different subjects, by which the varieties in its appearance and consistence are produced."

It has been supposed that the liquor amnii may, all of it, be discharged as early as the sixth month of pregnancy, without producing injury to either mother or child; but this cannot be true, it would appear, since it is well known, that when the membranes are broken intentionally, so that all of the waters are discharged, the uterus never fails to contract itself until abortion or the birth comes on. A discharge from the vagina, somewhat resembling the waters, however, may appear for weeks, and even months, before the delivery takes place; but in such cases it has been observed, that no diminution in the size of the abdo-

men occurs, from which circumstance it is known that the real liquor amnii does not pass off.

The normal purposes of this fluid in the system appear to be to afford the fetus a safe and easy lodgment in the uterus. If it were not there to protect the embryo, it would constantly be in danger of being destroyed by mechanical violence; besides which, it would be almost certain of adhering to the inner surface of the womb in such a way that the birth could not possibly take place. At the time of labor, too, we see the advantages of the "bag of waters," for as it is protruded in advance of the child, it forms a soft, yielding wedge, as it were, which gradually dilates the soft parts, without overstretching or tearing them, which would not be the case if the comparatively hard head of the child was the first to present itself.

The rupture of the membranes, which ends the first stage of labor, may take place a very short time before the expulsion of the child, or it may happen prematurely, as it were; that is, many hours, or even days or weeks before the child is born. In such cases the occurrence is to be considered as an accident or exception to the general rule. It does happen, however, every now and then, and in many cases it seems to make no difference whatever in regard to the future progress and safety of the delivery.

The greatest agony, as I have remarked, is experienced at the time the child is brought into the world; but if I could make plain to you the mechanism of labor, you would be struck with admiration, I am sure, at the wonderful marks of benevolence and design which are exhibited in the *manner* in which a child is expelled from the uterine cavity.

You may ask why it is that a woman should be made

to suffer pain at all in bringing forth a child, and why did not the Creator form the system of woman in such a way that a child could be expelled without causing any of that agony which is well known to be a natural circumstance of childbirth. I answer, it was not possible for God to create woman in such a way. Suppose He had made her pelvis larger, and the soft parts more yielding; she would have been constantly subject to the misfortune of miscarriage; or rather, it would not have been possible for her to carry a child at all.

But see the beautiful, and at the same time wonderful operation of nature in the mechanism of parturition. At first, some days before labor is to come on, the abdomen begins to subside, showing that the uterus, with its contents, is gradually sinking downward in preparation for the greater struggle that is to take place at the birth. Probably, too, the womb at the same time begins to contract itself more firmly upon the child, and, as it were, begins to gather strength for the contest which it is about to engage in, namely, that of forcing the child into the world. After this there appears a greater discharge of mucous than ordinary from the womb and vagina, which serves to soften and lubricate the parts in preparation for the terrible distension which is to take place. Gradually, also, in the first stage of labor, the womb dilates, for too sudden a distention of this important part would be very apt to cause a fatal rupture of the organ. In the second stage, the head of the child is driven through the os uteri into the vagina. As the pains continue, the face of the child is turned into the hollow of the sacrum; that is, toward the back of the mother, the wider part of the head being in the wider part of the pelvis, just as a wise mechanician

would naturally place it; but in the beginning of labor, when the child's head is at the upper part of the pelvis, it lies more to the side of the mother, corresponding to the wider diameter of this upper strait.

Look at a skeleton, I repeat, that bugbear of our childhood, that grim yet beautiful remnant of our mortality; and when you see and understand how admirably adapted the form and shape of the pelvis is to the ends for which it was created, tell me if you do not recognize in this adaptation the most unmistakable evidences of the work of an Almighty hand.

In cases of first children, the first or dilating stage usually occupies from six to thirty or more hours. It is natural to expect that a woman must suffer greater pain, and bear a more tedious labor with her first child than with the subsequent ones. "I have heard a voice as of a woman in travail, and the anguish as of her that bringeth forth her first child," saith the prophet Jeremiah. The difference in the length of the first and subsequent labors, however, is not usually in proportion to the number of children that have been borne. If a woman be twenty-four or thirty-six hours in labor with her first child, she may be only six or eight with her second, and in the subsequent labors only three or four hours. There will, of course, be many deviations from any calculation of this kind that can be made, but the practitioner will, however, often be able to form a tolerably accurate opinion of the probable duration of a labor, if the woman have had a number of children previously. But even here there will be a good deal of liability to error, since the fifth, sixth, or tenth labor may prove a very tedious and difficult one,

because of some mal-position of the child. I had an example of this kind in my own practice some months ago, in which a lady suffered incomparably more with the birth of her third child than with both of the former together, and the labor was protracted to thirty hours, which was a much longer period than either of the former had been. This happened in consequence of the face of the child, that is, the wider part of the head, presenting forward in the narrower part of the outlet of the pelvis, whereas in almost all cases the reverse of this takes place, as I before remarked. Such cases are, however, fortunately very rare, the exception only to the general rule.

You will readily understand why the first labor is apt to be somewhat more difficult than subsequent ones, when you recollect that all the soft parts, such as the womb, vagina, the external organs, etc., are more rigid and unyielding in the first labor than they afterward are. The bones, recollect, are the same at all times; they do not give or separate, as many of you have supposed; they are bound so firmly together that it is not possible for them to be separated, in their natural and healthful state, by any such force as that which is exerted in the birth of a child, although this force is a great one. It is necessary that the bones of the pelvis should be thus strongly bound together, otherwise they would not be sufficiently firm to answer the purposes for which they are intended.

THE AGE AS AFFECTING LABOR.

If the patient be considerably advanced in years at the time of her first pregnancy, the labor is apt to be, or rather, must necessarily be, a more difficult one than would occur earlier in life.

In the life of any woman there is a period at which her system has become, as we say, matured, or, in other words, capable of child-bearing. After the system has become thus matured, it is evidently more natural, and consequently more healthful to bear children than not to do so. We are to suppose, then, that if a woman follows the order of nature, it will be better for her, in regard to the easiness of childbirth, than if she becomes old before this function is brought into action. Nature, however, is not so closely bound down to arbitrary rules as we might at first conclude. Indeed, we could not reasonably suppose that the Creator would form woman's system in such a way that she could not safely bear children, even if the child-bearing function were not brought into action until some years after puberty. I knew a lady whose marriage took place quite late in life, and whose first child was born when she was forty-two; and although her labor was a severe one, lasting seventy-two hours and upward, yet she recovered remarkably well, as much so as almost any one I ever knew. Her child, too, was a fine, healthy one, and throve well. Another lady, whom I attended about one year since, who was thirty-eight years old at the time, it being her first labor, felt some pains for two days and nights previously to the one on which I was called to visit her. It could hardly be said, however, that labor had fully set in before ten o'clock of the day on which the child was born at four in the afternoon, making the real labor only about six hours. Thus we see that, although the *age* of the individual has generally more or less influence in regard to the painfulness and length of labor, yet a woman who is far advanced in the child-bearing part of her life, when she bears her first child, has apparently as good

a chance for a speedy and favorable recovery as a younger one has. In this circumstance, too, we have still another among the many proofs of the benevolence of the Creator of all things. He, in His wisdom, foreknew that it would not be proper for every woman to marry precisely at that age in which it is most natural for her to become pregnant, and consequently her system was formed with a reference to that circumstance, although it is admitted that labor is somewhat more difficult and protracted if it occur for the first time late in the fruitful period.

It is an unwise procedure to tell a woman, as has been sometimes done, that because she is somewhat advanced in years, and must consequently expect to have a difficult labor, she should be bled frequently toward the close of her period, have purgative medicines given her, etc., with the view of *helping* nature, as it is said. But it were far better, more honest, as well as more truly philosophic, to tell her that, in order to get along the best that may be under the circumstances, she should do every thing in her power to improve her general health; for always the more strong and vigorous the patient at the time of labor, the better is her prospect in every respect. Suppose, too, it were deemed necessary to reduce her system somewhat toward the close of pregnancy, how much better are abstinence and fasting for that purpose than bleeding and cathartics? It is a foolish practice to bleed or drug the system when we have always at hand so much better means.

LETTER XXVI.

MANAGEMENT OF LABOR.

The Placenta, or After-Birth—The Membranes—Management of the After-Birth—Rules for Extracting it—Of Flooding after Delivery.

In the preceding letter, I spoke of the first two stages of labor. The last, which refers to the birth, or expulsion of the placenta and membranes, I now propose considering.

First, I must say something of the nature and office of what is termed the after-birth.

The placenta, or after-birth, is of different forms in different animals. In the human subject, "it is a flat, circular

THE PLACENTA AND UMBILICAL CORD.

body, about six inches in diameter, and about one inch and a half in thickness at the center, becoming thinner toward the circumference. Usually in the center, but sometimes at or near the edge, we find the insertion of the funis, or umbilical cord, the vessels of which immediately ramify in a divergent manner upon the surface of the organ."

From Dr. Maunsel, of Dublin, I make the following quotation, in regard to the office of this viscus:

"The uses of the placenta appear to be in some degree analogous to those of the lungs and stomach of the breathing animal. The blood passes into it from the hypogastric arteries, and after a very free circulation through it, returns by the umbilical vein directly to the heart. The circulation continues until respiration is established, when it ceases spontaneously, and any interruption of it, before the latter process has commenced, is immediately fatal. From these facts we are warranted in inferring that a change necessary to life (probably oxygenation) is produced in the placenta, although the nature of that change is obscure, and the relative properties of the blood in the umbilical arteries and veins not at all known. That the organ in question not only revivifies the blood, but also elaborates new vital fluid, thus performing a function analogous to that of the stomach, can only be inferred from the absence of any other source from whence the fetus could obtain materials for growth and support."

THE MEMBRANES.

These are expanded from the edge of the placenta, in connection with which they form a complete *involucrum*

of the fetus and waters, and at the same time a lining for the uterus. The membranes grow and expand in the same proportion as the fetus, and when expelled after the birth has taken place, are, in connection with the placenta, termed the *secundines.*

There are three of these membranes, which are found surrounding the fetus. "There is first the outer, or connecting membrane, which is flocculent, spongy, and extremely vascular, completely investing the whole ovum, and lining the uterus; secondly, the middle membrane, which is nearly pellucid, with a very few small blood-vessels scattered over it, and which form a covering to the placenta and funis, but does not pass between the placenta and uterus; thirdly, the inner membrane, which is transparent, of a firmer texture than the others, and lines the whole ovum, making, like the middle membrane, a covering for the placenta and funis. With the two last the ovum is clothed when it passes from the ovarium into the uterus, where the first is provided for its reception. These membranes, in the advanced state of pregnancy, cohere slightly to each other, though in some ova there is a considerable quantity of fluid collected between them, which being discharged when one of the outer membranes is broken, forms one of the circumstances which has been distinguished by the name of *by*, or false waters."

It seemed necessary that I should make these preliminary remarks concerning the physiology of the placenta and the membranes, in order that you might the better understand the third process of labor, or that which consists in the expulsion of these growths, the secundines, as they are called.

I have now some practical remarks to make, which I

hope you will study faithfully, for it not unfrequently happens that a child is born before you can obtain the assistance of a physician; and after the child has been expelled, what to do in reference to the after-birth; that is a question which, under such circumstances, puzzles your sex more a great deal than it need or ought to do.

Suppose, then, that a child is born suddenly, or at least before the medical man or woman whom you would employ, comes to your aid, and the placenta remains undelivered.

I shall tell you, in another place, not to be in such a flurry, as women too often are, in regard to separating the umbilical cord. So, too, I say in regard to the after-birth; *be in no hurry.*

Have you not often heard people say that the after-birth has grown fast and *sticks?* Women sometimes say this, and so do the doctors, some of them; such, for example, as are not honest enough to tell the truth, if they know it, and would make you believe that they are doing a great thing when they get away the after-birth, if it sticks.

Now please remember that it is right that the placenta should grow fast to the womb; that is, to its inner surface. It is always grown fast, and should be; but it is possible for it to adhere more firmly in some cases than in others; and in some cases, too, the uterus seems to be so weak that it has not power sufficient to expel it.

In cases when the womb is very active after the birth of the child, the placenta may be expelled very quickly.

But it is more commonly the case that after the uterine contractions have forced the child into the world, the womb reposes itself for a half hour, less or more. After this, periodical pains begin to occur, so that the after-birth

may be completely thrown forth into the world; but far oftener it is either wholly, or in part only, into the vagina, where it remains for a time at least.

At what time, and under what rules, should manual aid be administered in helping away the after-birth? By different practitioners different rules have been instituted. A rule of Dr. Hunter's was to wait till four hours after the birth of the child. If the placenta come away of itself, before this time have elapsed, it is well; but if, on the other hand, it still remain in the cavity of the uterus, manual aid may become necessary.

Another rule is, to judge by the pains, without any regard to the length of time that has elapsed since the delivery of the child; pains, it is said, accompany the contractions; the contractions expel the placenta; the pains, therefore, indicate the time at which artificial assistance should be interposed.

Another rule is, first to determine the situation of the womb before any manual attempt is made for helping away the after-birth. If, on examination, the placenta is found lying in the upper part of the vagina, and through the os uteri, and more especially if the union of the umbilical cord with the placenta can be felt, it is considered proper to remove it. But if the umbilical cord ascend high into the womb, and no part of the placenta can be felt, it is considered best to wait.

Still another rule is, to act according to the feeling and condition of the uterus, without any regard to the length of time after the birth, the pains, or the situation of the placenta. If, on examination externally, it is found that the womb is yet large, uncontracted, and pulpy, the placenta should not, according to this rule, be interfered with.

But if, on the other hand, there is an opposite state of things—that is, if the uterus is found hard and contracted, feeling like a child's head in the abdomen, and if it remain so for some time permanently, it is considered safe and best at once, in a proper manner, to remove the viscus. A skillful practitioner will bear in mind all these circumstances, and form a rule out of all of them, as it were, to guide him in each individual case; and I wish you to remember, that although you may consider the principal part of delivery is accomplished at the time when the child comes into the world, it is to be remembered that its real danger has not yet commenced, and that the birth of the placenta is a most important part of the process.

Into all the niceties and difficulties of this part of the accoucheur's art, I do not, you will remember, attempt to induct you. It is my object to give you some general ideas of the matter, such as may be of use to you in an emergency, and prevent a great deal of unnecessary anxiety and alarm in some cases. My remarks will also, I trust, go to impress upon your minds how very necessary it is, under such circumstances, to have the aid of a physician—a man or woman, I care not which—who understands well the art. You may say that nature is sufficient in most cases to perform her own tasks unaided and alone. That, I admit, may all be true, especially with those who have good constitutions, and who observe well the laws of life. But remember that these circumstances do not always exist. Any one of you would rather incur the expense of having a physician a thousand times, when he is not needed, than to suffer danger for his want in a single instance.

OF FLOODING AFTER DELIVERY.

Hemorrhage is one of the most dangerous of all circumstances connected with labor. Fortunately, however, this does not often happen; and in those cases when it does occur, it may generally be very soon arrested, provided the proper means are adopted.

This form of uterine hemorrhage not unfrequently occurs when the physician is absent. For this reason, it is necessary that I should make some remarks on the subject.

Flooding may be either external or internal. When the blood passes from the vagina, we call it external; when it does not thus pass off, but remains within the cavity of the uterus, causing the abdomen to swell and the patient to faint, we call it internal.

Here is a remarkable fact in nature. Women, in consequence of possessing the menstrual function, and being exposed to the accidents of childbirth, are more subject to hemorrhage than men. In striking accordance with this fact, it appears to have been a benevolent intention of the Creator to form the female system in such a manner that it more readily recovers from profuse loss of blood than that of the opposite sex. Under the effects of severe loss of blood, the system of a man remains pale and enfeebled for months, perhaps, while that of a woman regains its strength and color in half the time. Many a time, before I was aware of these facts, I have been fearful, and sometimes greatly alarmed at the amount of blood lost at the birth of a child, and when, to my great surprise, in a day or two the patient was up, and apparently almost as well as ever. This, then, is an important practical fact, and one well worth remembering.

In regard to the *treatment* of flooding after delivery, I refer you to what I have already said under the head of uterine hemorrhage. Cold, remember, is the great agent here, as all acknowledge.

If the woman faints from loss of blood—and she may also faint from mere debility—you should not be alarmed at the circumstance. People generally make a great deal too much ado when a patient faints. It should be remembered that the object nature has in causing a person to faint from loss of blood, is to arrest the heart's action, for the most part, so that the blood may, as it were, cease its movement in the uterus, and a coagulum or plug be formed in the orifice of the bleeding vessel or vessels. This is nature's method of arresting an hemorrhage. This being so, it is no doubt often the case that bringing a person *to*, is the cause of more harm than good. There should be no hurry; give the patient good air to breathe, and nature will, as a general thing, do her own work better than we can do it for her in these cases.

LETTER XXVII.

ADVICE CONCERNING LABOR.

The Medical Attendant—State of Mind—The Room—State of the Bowels—The Dress—The Bed—The Position, Exercise, Food, and Drink.

It will be inferred, from what I have already said in these letters, that I am in favor of employing a physician, male or female, in all cases of parturition. Most cases, I admit, will get along well without any medical aid whatever; but, as you are well aware, there are exceptions to all rules; and it is for these exceptions that a physician is needed.

In the first place, then, it is always advisable in labor that you call your medical attendant early. If it is worth your while to have aid at all, it is best to have it in good season. The physician himself always prefers to be called early.

Once you have fixed upon your medical attendant, resolve to be guided by him in every particular, and follow his directions faithfully. If you have, from necessity or otherwise, chosen a *man*-midwife, you need have none of those foolish whims which some among the so-called reformers of the present day would have you to believe.

It is always an unpleasant duty for one to attend a woman in childbed; and be assured that, of all places in the world, a delivery is the last one in which lascivious or lustful excitement is experienced. I wish you, then, one and

all, to remember that if it is unpleasant for *you* to be attended by a man under such circumstances, it is equally so to *him*. If he is a conscientious and benevolent physician, he will cheerfully do that which he considers his duty to do; but as far as his own personal self is concerned, he would much rather be at home, enjoying its quiet and its sleep, if need be.

In regard to your preparation for labor, I will suppose that you have done all in your power to maintain an equable and healthful state of both mind and body, and that you are resigned to encounter whatever God in His mercy may see fit to bring upon you. If you have done all that you could for yourself, and are still willing and determined to do so, surely you should feel contented; you can do no more.

The Room.—As to the apartment in which you are to be confined, you should take the best one in the house. If possible, you should have one which is well lighted and aired, and which can be readily warmed, if there is need of raising the temperature. If it is in a city, a back room should be preferred in preference to one in front, on account of the noise of the street.

If the labor is to be a tedious one, it is particularly necessary that the air of the apartment be kept as pure as possible. Not only should the strictest attention be paid to ventilation, but all odors and perfumes should be dispensed with. These do no good, for mere *hiding* the bad air is not *destroying* it, and they always do more or less harm.

There should not be too many persons in the room when the woman is to be confined. In the country it is by far to much the fashion for a large company of women

to get together on such occasions. This always renders the air of the apartment more foul than it otherwise would be, and for other reasons it ought not to be permitted.

I have many a time pitied the condition of women whom I have attended, who had but one room to live in, cook, wash, iron, and at last to be confined in; and yet those women have in general got along better than such as live in a more sumptuous way. Such women are, in fact, *workers*, and employment, as I have before remarked, is a most blessed thing in regard to preparing the system for the important function of labor.

The Bowels.—If the bowels should be constipated at the time when labor is about to come on—and such is likely to be the case—the woman should use clysters freely. This practice is, in fact, advisable in all cases, inasmuch as it can do no harm. If there is fecal matter in the colon, it is better that it be removed before the birth is about to take place. Hardened excrementitious matters in the lower bowel are always a hindrance to labor.

The Dress.—Formerly it was considered a matter of importance as to how a woman was dressed in labor. Different countries and provinces had their particular forms of gowns, jackets, chemises, and head-dresses. The great thing, however, to be observed, is simplicity; that is, nothing should be worn which at all interferes with the body in any of its functions or parts. If the dress is such as causes no constriction of the abdomen, the chest, or the neck, such as gives free motion to the limbs, and is of such material that it makes the body neither too hot nor too cold, it is all that is required. Generally too much clothing is worn at the time of labor. It is safer to be on the side of too great coolness than of the opposite extreme.

The Bed.—This has been called by different names; the *lying-in bed, bed of labor, bed of pain, bed of misery, little bed,* etc.

Some women will not make use of any sort of couch whatever. I know a lady in this city who has borne a pretty large family of children, who affirms that she gets along much better upon her hands and knees on the floor than in any other way. Some are delivered standing up, the elbows resting on some object, as the mantle-piece, bureau, the back of a chair, or some other piece of furniture, or perhaps upon the shoulders of a friend. "A strong and well-formed woman," says Velpeau, "may be delivered in any posture, on a chair, on the floor, a bundle of straw, on foot, and on all the kinds of beds that have been proposed; so that it is only in the cases where nothing interferes with the accoucheur's doing just what he thinks best, that he ought to attach some value to the composition of the lying-in bed; further, the only essential matter is, that the woman should lie as comfortable as possible, that she should not be incommoded, neither during the pains nor the intervals between them, and that the perineum may have room to dilate."

Oftener than otherwise in this country, the woman is delivered on the same bed on which she sleeps. Sometimes, also, a cot is used, which also is a very convenient contrivance, since it allows of the free passing of the physician and others about it. It is, likewise, a healthful plan to move from one bed to another after labor; but this is by no means strictly necessary. Cleanliness, comfort, and good air—these are the great requisites in regard to the bed.

The Position.—If the patient is to lie upon a bed, which

is doubtless the preferable plan in the majority of cases, what shall be her position?

This, like many other things, is a matter somewhat of fashion. In Great Britain the woman is always placed upon the left side, with the thighs flexed, that is drawn up toward the body, and the hips brought close to the right side of the bed. The same position is usually adopted in this country; but on the Continent, the woman is placed on her back to be delivered. This, I am inclined to think, is the most favorable, as well as most agreeable position, although perhaps not the most convenient for the medical attendant.

Exercise.—During a considerable portion of an ordinary labor, it is doubtless better for the patient, especially if she feel inclined to it, to sit up, and walk about a little from time to time. This not only affords some relief, but likewise aids in causing more efficient contraction of the uterus.

Food and Drink.—It would always be better, so far as food is concerned, for the patient to fast a meal or two before labor comes on. She should, however, be allowed all the drink she desires, pure soft water being the best she can have. If she drink pretty freely, it will be of essential service to her in keeping off feverishness, and in helping the renal organs to act properly. If the pains are tardy, taking now and then a drink of cold water, even against the inclination, will help on the pains. Even ice is used with good effect for this purpose.

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LETTER XXVIII.

MANAGEMENT AFTER DELIVERY.

Importance of Attention to this Period—Evils of too much Company—Bathing—The Bandages, Compresses, etc.—Sleep—Sitting up soon after the Birth—Walking about—The Food and Drink.

SUPPOSING that the mother has been safely delivered, the child separated, and the after-birth cast off, what advice have we to give in regard to her recovery?

I have before remarked that the birth of the secundines is the most dangerous part of labor, although not the most painful. I have now to remark, that the *real* danger in midwifery does not commence until after the whole birth is completed. Childbed fever, inflammation and abscess of the breasts, these are the sad mishaps which we have to fear in these circumstances, and for which I feel an anxious solicitude in your behalf.

You may think me strange when I inform you, that I have had more trouble in the practice of midwifery from the one circumstance of the woman having too much mental excitement within a few days after delivery, than from all other things combined. I am sure I am not mistaken when I assert that I have known more accidents and mishaps to occur from this one cause of seeing company too soon after the birth, than from all other causes put together. So important do I consider it for you to keep,

as it were, quiet in this respect, I should think my labor in writing these letters a hundred-fold rewarded, if I could be successful in warning you of the danger of over-excitement at the time when you are getting up from confinement. As the most important advice, then, which I can give in regard to all the subjects connected with midwifery, DO NOT ALLOW YOURSELF TO SEE COMPANY FOR MANY DAYS AFTER THE BIRTH.

"Most of the diseases which affect a woman in childbed," says the great Velpeau, "may be attributed to the thousands of visits of friends, neighbors, or acquaintances, or the ceremony with which she is too often oppressed; she wishes to keep up the conversation; her mind becomes excited, the fruit of which is headache and agitation; the slightest indiscreet word worries her; the slightest emotions of joy agitate her in the extreme; the least opposition instantly makes her uneasy, and I can affirm, that among the numerous cases of peritonitis met with at the *Hospital de Perfectionnement*, there are very few whose origin is unconnected with some moral commotion."

Is it not possible to change the fashion in regard to this matter? This remains wholly with yourselves; for we of the masculine gender have nothing to do with it. Are you not all sisters? Why, then, be offended with each other if you do not go to see the sick woman for a whole month after her child is born. Could you not write her now and then a friendly note, or send her some little delicacy to eat, which would be evidence enough that you had not forgotten her? I am aware there are among your sex a certain set of gossiping idlers, who do not know how to kill time in any better way than to be gadding abroad when they are least needed. If one is really sick and

needs aid, they are the last persons in the world to leave their homes; they are good for nothing among the sick. To such women I care to say but little, for I consider the task of reforming them a very hopeless one, as all experience proves. Especially where a new method of treatment, as, for example, the water-cure, is practiced, do these twattlers gad about, making mischief wherever they go.

Bathing.—It is no new thing for a woman to be bathed, and that in cold water, soon after delivery. It was practiced among the Romans, and, as we have seen in another part of these letters, is still the custom among several of the savage nations.

I need not remind you, however, that this practice has, for a long time at least, found no place among the more enlightened portions of our race; that instead of cold water being regarded as a most estimable remedy in childbirth, it has been considered as a very dangerous agent, which, in truth, it is when improperly administered. Many of you can but too easily call to mind the old notions which were instilled into your minds on this subject; notions which you now know to be not only erroneous, but sadly mischievous when carried out in practice.

More than ten years ago, and while I was yet a student in medicine, and had never heard of the water-cure as practiced by the great Priessnitz, I was in the habit of revolving these matters in my mind. It occurred to me often, that if the Roman women, and the Indian women of different nations, could reap so great a benefit as appeared to be derived from ablutions performed soon after childbirth, that our own females too, weakly although they are many of them, could gain similar advantages from pursuing a

like course. It was thus that I was led, as far back as 1843, to strike out a course of treatment for myself in these cases, having no medical authority or precedent to go by. The result of this treatment is now, fortunately, getting to be pretty well understood, and the merits of the new method appreciated in almost all parts of our country. In Europe they are altogether behind us in the improvement to which I allude.

I need not here go into any lengthy details concerning the methods of bathing that are proper to be adopted in the parturient state. The numerous cases which I have given will serve as a sufficient guide, I trust, to all of you who are concerned. I may remark, however, in general terms, that there is no need of doing any violence in the way of a bath; and those who have not access to the personal advice and superintendence of a physician who understands the practice, may always act safely by washing the patient in her bed. Thus, if a blanket or some other extra article is placed beneath her, she may easily be washed over the whole surface, piecemeal, a practice which, though it is neither so thorough nor useful in most cases, as it would be to go at once into the tub, is yet a good one, and productive of great comfort.

The Binder, Compresses, etc.—As to the use of the wet bandage, the compresses, etc., a few words will here be in place. If a dry bandage is ever needed as a support, the wet one is much to be preferred to it. As a general thing, however, we put no bandage upon the woman soon after the birth, as will be seen by reference to the cases given in this work; we wish to change and rewet the application frequently, and for this reason the simple compresses are the most convenient. But when the patient

is to sit up or walk about, the wet girdle, if properly arranged with tapes to secure it, and made pretty tight at the lower part of the abdomen, affords a good deal of support. The wet bandage does not slip upward and get out of place near so readily as the dry one.

It will naturally occur to you, whether the going without the old-fashioned belly-bandage will not be likely to prove injurious to the woman's form. The sum and substance of this whole matter is just this: whatever tends to weaken the constitution in general, and the abdominal muscles in particular, must have a tendency to produce laxity of the fibers, thus rendering the part more pendulous. On the other hand, whatever tends to strengthen the system and to give tone to its fibers, must have a contrary effect. Now, the dry belly-band, even when it is so arranged as to keep its place—which it generally is not—is too apt to become heating, and, of course, a source of debility under such circumstances. For this reason it is plain that a cold wet girdle is altogether better than a dry one. Nor should this even be left on too long a time without changing and rewetting it. This should be done, as a general thing, every three or four hours at farthest, and in warm weather oftener.

The Repose.—Some have feared to allow the woman to go to sleep for some hours after delivery, fearing that she might be taken in hemorrhage as a consequence. It is possible that a patient under such circumstances may wake suddenly with a flooding upon her, particularly if she be too warmly covered up in bed. But by all of the best authorities it is regarded that the sooner the woman sleeps after she has passed through the agony of labor the better. Sleep is, indeed, no less "nature's sweet restorer"

under such circumstances than at other times; and it would be most cruel to deny a patient this privilege, when it would be so grateful and refreshing to her.

Sitting up soon after the Birth.—I have proved satisfactorily to myself, that there is great error abroad in this country generally in regard to the parturient woman rising soon after the labor is past. It appears to be the belief of physicians generally in this country, that it is highly dangerous for a woman to sit up before some days after accouchement. The common saying concerning the ninth day you have all of you heard.

Velpeau, of Paris, who is higher authority by far than any old-school man in this country, says: "After this first sleep—that is to say, after the lapse of two or three hours—the patient should sit up in bed, and take a little broth; *this position seems to rest her, and allows the lochia which had accumulated in the vagina to flow readily off.*" That is the point: it serves to REST her; that is, when a woman is tired of lying down, both common sense and instinct declare that she should change her position; in other words, sit up. This very same thing I have taught strenuously for these seven or eight years, as many of you know; and just now, while I am writing, I find that Velpeau long ago recommended the same thing.

Walking About.—Precisely the same principle holds good in regard to walking and all other modes of exercise as in sitting up. A little and often should be the rule. The cases which I shall give you will form a sufficient guide on this point.

I have known a great many more persons to be injured by inactivity, remaining too much in bed and in overheated rooms, than by walking about too much and too soon.

The Food and Drink.—I have but a word here to say on this subject. The patient should begin directly after birth with the same kinds of food and drink which she intends to use during the period of nursing. If she is to eat fruit, which I consider good for her, she should take it from the first. Prudence should, of course, be exercised in regard to *quantity* as well as quality of food under these circumstances.

One of the greatest and most common errors in regard to the diet soon after labor, is that of partaking of articles which are of too fine and concentrated a nature. The bowels tend naturally to sluggishness for some days after confinement; hence the diet should be of an opening nature, such as brown bread, cracked-wheat mush, good fruit in its season, and good vegetables. It is a poor practice to keep the patient for nine days on tea, superfine bread, toast and butter, and the like articles. It is no wonder that women dieted in this way become constipated, nervous, low-spirited, and feverish.

LETTER XXIX.

MANAGEMENT OF THE CHILD.

Of Separating the Umbilical Cord—Practices of different Nations—Of Still-Birth, and Resuscitation of the Child—Washing and Dressing it.

It was necessary, in describing the three stages of labor, to pass over for the time an important matter, namely, that which relates to our attention to the umbilical cord. In treating of this subject, it will be necessary for me to repeat some things which I have said in another volume, a "Treatise on the Management and Diseases of Children."

Soon after the birth of the child, separating the umbilical cord requires our attention. How shall this be done? Shall we use a sharp or a dull instrument in making the division? Shall we apply a ligature? where, and in what manner to the cord?

It is reported of the aborigines of Brazil, that they merely bite or chew off the cord, as many of the animal tribes are found to do. This is imitating nature closely enough, certainly, and more so, perhaps, than the usages of civilized society would warrant us in doing at the present day.

Dr. William Hunter, in 1752, remarked in his manuscript lectures concerning the method which the instinct of animals leads them to adopt, as follows:

"I will give you an idea of their method of procedure, by describing what I saw in a little she dog of Mr. Doug-

lass'. The pains came on, the membranes were protruded; in a pain or two more they burst, and the puppy followed. You cannot imagine with what eagerness the mother lapped up the waters, and then taking hold of the membranes with her teeth, drew out the secundines; these she devoured also, licking the little puppy as dry as she could. As soon as she had done, I took it up, and saw the navel-string much bruised and lacerated. However, a second labor coming on, I watched more narrowly, and as soon as the little creature was come into the world, I cut the navel-string, and the arteries immediately spouted out profusely. Fearing the poor thing would die, I held the cord to its mother, who, drawing it several times through her mouth, bruised and lacerated it, after which it bled no more."

This chewing, bruising, or tearing a part in which blood-vessels exist, causes them to contract in such a way as to prevent the occurrence of hemorrhage. This fact we see exemplified in cases where an arm or other limb is torn off with machinery, in which it is found that no bleeding of consequence takes place. But if a limb is severed with a sharp-cutting instrument, the arteries must be secured.

The New Zealanders, I am informed by a medical friend who spent some time among that people, cut, or rather tear off the umbilical cord with the edge of a shell, something like that of the clam or oyster of our own country.

It matters little, however, what instrument or material is used to effect the object in question. The cord being immediately after birth a dead substance, possessing no sensibility whatever, we may bite it off, or we may use a shell, a sharp knife, or a pair of good scissors or shears, whichever method we choose, remembering always that it

is of little consequence how we do it, and that it is as natural, precisely, for a man to exercise his ingenuity in making and using a convenient instrument as it is for a brute to use his teeth.

In the time of Hippocrates, it was not customary to divide the umbilical cord previously to the expulsion of the placenta. If this was slow in coming away, the child was placed upon a pile of wool, or on a leather bottle with a small hole in it, so that by the gradual subsidence of the skin or pile of wool, the weight of the child might draw almost by insensible degrees upon the placenta. In this way it was extracted without violence.

In modern times, it has been almost universally the custom to separate the child very soon after delivery, and before the after-birth has come away. "As soon as the child cries lustily, proceed at once to separate the cord," is the common doctrine among medical practitioners. But it is better, evidently, to wait, before this is done, until all pulsation has ceased in the cord. If we take the cord between the thumb and finger, we readily ascertain when its pulsation has ceased. It has a large vein in it for the transmission of blood from the mother to the child, and two small arteries, which return the impure or worn-out blood after it has gone the rounds of the fetal circulation. Blood is the only nourishment the child has while it is in the mother's womb. Hence it would be manifestly improper to rob the child of any portion of the fluid coming from the mother to it.

The ancients not only waited for the expulsion of the after-birth before tying the cord, but if the child was at all feeble or dead at birth, the placenta, when expelled, was laid upon its belly as a comforting and restoring applica-

tion. This practice, singular as it may appear to us in modern times, is not altogether without its philosophy; the mild, genial warmth of the after-birth was supposed to act favorably on the feeble powers of life, if such existed, or if it was dead, it was supposed the infant might thus be recovered.

Speaking of later methods, Dr. Denman observes: "It has been the practice to divide the funis (cord) immediately after the birth of the child; and the weaker this was, the more expedition it was thought necessary to use; for the child being supposed to be in a state similar to that of an apoplectic patient, a certain portion of blood might, by this means, be discharged from the divided funis, and the imminent danger instantly removed. There is another method which I have seen practiced, the very reverse of the preceding; for in this the loss of any quantity of blood being considered as injurious, the navel-string was not divided, but the blood contained in its vessels was repeatedly stroked from the placenta toward the body of the child. In all these different methods, and many others founded on caprice, or on directly contrary principles, children have been treated in different times and countries, and yet they have generally done well; the operations of nature being very stubborn, and, happily, admitting of considerable deviation and interruption, without the prevention of her ends."

"There is yet, in all things," continues this author, "a perfectly right as well as a wrong method; and, though the advantage or disadvantage of either may be overlooked, the propriety and advantage of the right method must be evidently proved by individual cases, and of course by the general result of practice. In this, as well

as in many other points, we have been too fond of interfering with art, and have consigned too little to nature, as if the human race had been destined to wretchedness and disaster, from the moment of birth, beyond the allotment of other creatures."

It is the testimony of this author, however, that some children, after they had began to breathe, had respiration checked, and died after the cord was divided in consequence, this having been done too soon. Beyond a doubt, many children have been destroyed in this way, and in this, as in many other things in the healing art, medical men have been too much in the habit of interfering with nature, and thwarting her in her operations.

It is the order of nature, and moreover a truly wonderful phenomenon, that in proportion as respiration becomes established in the new-born child, the pulsation in the umbilical cord begins to cease, first at the placenta, and so gradually onward to the child; physiologists are puzzled to explain the circumstance, but the fact is plain.

Hence it follows, that if the cord were left to itself, without any ligature, it would not expose the child to hemorrhage, or other accidents, even though it should be cut clean, and not contused or torn; some little blood might flow from the cut end, but every thing being left to nature, this could amount to but little, and such as would do no harm. But for the sake of cleanliness, it is proper that a ligature should be applied.

But it will be objected, that in some cases—though very rare—children have been known to bleed to death at the umbilicus. This has, indeed, happened in some few cases, in spite of ligatures, and every thing else in the way of styptics that could be applied. But these extreme cases

are not to serve as guides in forming rules of practice. Nature has exceptions to all her rules. Besides, we may account for many of these occurrences, by the fact that the natural operations are often perverted by improper treatment. Thus, if children are swathed tightly, as has been too often the case in civilized society, compressing the chest and the abdomen, and causing them to cry from distress, the embarrassed state of the viscera suffices to disorder the general circulation, and enable the blood again to pass out of the navel.

Hence, as a matter of practical safety, although it is not necessary, as a rule, to apply a ligature to the umbilical cord, even when we cut it very near the abdomen of the child, we had better do it, as no harm can come from the procedure; it is possible for it to do good, even to save the life of the child; properly applied, it is not possible for it to do harm.

As to the point at which we divide the cord—whether at a half an inch or an inch and a half from the abdomen —every one must be his own judge. It is an old woman's notion, both in this country and in the old, which was derived from the physiology of the ancients, and which requires that the cord should be cut very near the umbilicus if the child was a girl, and very far from it if it is a boy; such a mode of cutting being supposed to exert a great influence upon the development of the generative organs.

Notwithstanding the objections of some of the old women, I have separated the cord very near—say within half an inch of the abdomen. This is a much neater and more cleanly mode than it is to leave two or three inches of a dead substance to putrefy upon the child; besides,

the more cleanly the part is kept, the more quick does the healing process take place.

"As to the ligature itself," says Velpeau, "De la Motte advises us to apply it at the distance of one inch, Deventer, Levret, and the moderns, at the distance of two fingers' breadths, others at three, four, five, six, and even twelve inches from the abdomen. Some persons have recommended the application of two, and in such a way that the one nearest the abdomen should not be so tight as the other. Sometimes it has been recommended to draw it very tightly, at others very loosely. One person is content with a single turn, and a single knot; and another thinks there should be two turns, and a double knot; a third, like Planck and M. Desormeaux, makes first one turn and one knot, and then bends the cord into a noose to tie another knot upon it."

"A majority of the Philadelphia accoucheurs," says Professor Meigs, of that city, "in tying the navel-cord, pass two strong ligatures each twice around it, securing them with two knots; the one an inch and a half, and the other two inches and a half from the abdomen, and divide it between the two with a pair of sharp scissors. This is a cleanly practice in all cases, and prudent, if not essential, in twins;" cleanly, that is, because, as the professor means, the second ligature—that is, the one that is nearest the mother—prevents the blood coming from the placenta, and soiling the bed; the same principle I usually adopt, only the first ligature is placed half an inch, instead of an inch and a half from the abdomen. Sometimes, however, as in the night, it is perhaps better to leave the cord an inch or two long, and the next day tie it nearer the body. The ligature, since we use it at all, should be drawn very

tightly; the cord being a dead animal substance after birth, very soon shrinks; hence if the ligature is not very tightly drawn, it may slip off in a day or two. In tying the ligature, we should be careful not to pull at the child, for in so doing we might cause a rupture, or a tendency to such an occurrence.

In making the division—which is usually done with a pair of good shears or scissors—we must be careful to avoid cutting off a finger, toe, or the private member. The infant, in its struggles, is very apt to get some of these parts in the way just as one is making the cut.

As to the kind of ligature: some think they must always have a narrow tape; and hence we often find, in attending a case, that the mother has already prepared herself with this material. But a common round thread is to be preferred; we can draw this more tightly than we can a flat ligature. A strong linen thread, doubled and twisted if we think it necessary, I consider the best. "Some would not dare to use any thing except tape," says Velpeau; "whereas wiser persons make use of whatever they can find at hand."

One circumstance should be particularly noticed in regard to tying the cord. It is said that it is possible for umbilical hernia to take place before the child's birth. In such case a portion of its intestine must have protruded into the cord. Hence, in such case, if we were to tie a ligature about the cord near the body, and where the intestine is—a fact that we can know by the cord being bulged out, or enlarged at the part—and should cut it off so as to sever the intestine, we should inevitably kill the child. Few practitioners have ever seen such a case; but inasmuch as it is said that such hernia may possibly exist,

we should always watch for it. It would be easy to detect, but if one should have any doubt as to whether there is hernia or not, he may apply the ligature an inch or two from the child's body, and thus make sure of doing no harm.

It is important to remember, that at the time of, and before making the separation, the child should be so placed as to allow the most free respiration; it has just begun to breathe for the first time in life; it is just as important that it has good air as it is for any of us. Many a tender infant has been injured at the very beginning by being smothered among the bed-clothes as soon as born. People everywhere, think it will take cold as soon as it is exposed to the air; but think, you who understand the anatomy and physiology of the human system, how exceedingly delicate the fine internal net-work of its little lungs is! And think you that the external skin is less able to bear the new impression of the atmosphere than the lungs are?

As to difficulties at the child's navel, I have never had them. It is certainly a very simple thing to leave it altogether to itself, with the exception, the second day and onward, of laying upon it a soft, clean, wet compress, of four or five thicknesses, so that it remains constantly moist. This water-dressing, often renewed, and kept thoroughly clean, heals the navel more quickly than can be done in any other known way.

From what I have been able to learn, I infer that with water-dressing this healing is effected from one fourth to one third less time than by the usual methods.

The period of the natural separation of the cord varies considerably in different cases. According to M. Gardien, it usually falls off on the fourth or fifth day. M. Orfila

says the fourth, fifth, or sixth day. M. Dennis the fifth, sixth, seventh, or eighth day. M. Billard remarks, that the desiccation is complete toward the third day, and it is on the fourth or fifth day that the cord is separated from the abdomen.

Dr. Churchill, of Dublin, kept an account of the period of its decadence in 200 cases, and it occurred as follows:

In	1 case	it fell on the	2d day.	In	24 cases	it fell on the	7th day
"	4 cases	"	3d "	"	10 "	"	8th "
"	20 "	"	4th "	"	7 "	"	9th "
"	52 "	"	5th "	"	1 case	"	10th "
"	81 "	"	6th "				

According to Dr. Churchill, then, it would appear, that the fifth and sixth days are the ordinary periods of the detachment. The cord has been known to remain undetached as long as fifteen days; but such cases must be very rare.

Complete cicatrization is commonly effected by the end of the second week. The healing powers vary somewhat in different cases. In one case, where both the father and the mother were of scrofulous tendency, it was a number of weeks before the healing process was fully completed. The child, however, in the end did well.

OF STILL-BIRTH.

The child may be born *still*, from its not having passed to its full period, or from various causes it may not have vital stamina enough to enable it to live. In some cases the child is born without any manifestations of life whatever appearing. The face is swollen and livid, the body flaccid, and the navel-string does not pulsate.

In such cases we should not at once wholly despair of life, although there is not usually much to hope for; yet, inasmuch as cases of this kind are now and then recovered, they ought not to be immediately abandoned without making suitable efforts for the resuscitation of the vital powers.

A frequent cause of the absence of respiration in the new-born infant is, separating the umbilical cord too soon after birth. Such is the opinion of Denman, Burns, Baudeloque, Dewees, Elberle, etc., etc., and there can be no doubt that many a child has been destroyed by this inconsiderate practice. By all well-qualified and skillful practitioners it is laid down as a rule, "*that the cord is not to be tied until the pulsations in its arteries have ceased;*" and this any person of ordinary understanding, and without medical knowledge, can easily ascertain, by simply taking the cord between the thumb and forefinger.

In consequence of the neglect of this rule, Doctor Dewees tells us that he had reason to believe he had seen several instances of death, and this of a painful and protracted kind. "And that this is probably one of the causes of the many deaths, in the hands of ignorant midwives and practitioners," this auther observes, "we have too much reason to suppose." The practice with many is, to apply a ligature to the cord the instant the child is born, without any regard whatever to its pulsation, or the state of the child's respiration.

Treatment.—In the cases of asphyxia, to which I have referred, various methods of treatment have been adopted, some of which are, no doubt, valuable, while others are meddlesome, and worse than useless.

If the child is livid and dark-colored, it has been recom-

mended to abstract blood. This is best done at the umbilical cord; that is, by separating it. If the blood will not flow, it is recommended to strip some blood from it. It is, however, admitted that, in general, very little, if any, can be obtained in this way.

It has also been recommended to apply a cupping-glass to the umbilicus, so that by exhausting the air from the part the blood may be brought into motion, and thus made to flow, and this even after the heart has ceased to act. I know of no author, however, who has succeeded in this method.

The object of abstracting blood in any of these various ways is to set the vital fluid in motion, and to relieve the congested parts. But it appears to me that there is a far better method than this, and that is simply by friction with the wet hand. The child has in no case *too much* blood; it is only in the wrong place. The wet hand does not at all injure the skin; the cold water—for cold only should be used here—acts as a stimulus to the vital power, and the motion of the hand and the pressure will set a hundredfold more blood in circulation than the mere separating of the umbilical cord could do. Hence it is that I would depend much upon friction, and very little, if any, upon the abstraction of blood. This latter practice is destined to become as obselete in time, as that of bleeding in a severe injury or shock of the system—a method which has deservedly gone out of date among all scientific practitioners of the medical art.

In conjunction with the measure which I have just recommended, there is another of importance, which should be faithfully made; and that is, an effort to excite the respiratory function by artificial inflation of the lungs, and

compression of the chest with the hands, so as to imitate in a measure the natural acts of inspiration and expiration. In doing this the operator must apply his mouth to that of the infant—the latter having been first freed of the mucus that attaches to it—at the same time closing its nostrils, and endeavor by a moderate but uniform force of expelling the air from the mouth, to fill the lungs of the child. As the air is thrown into the lungs, the chest of the child must be allowed to expand as much as it will; and then, as this act is discontinued, the chest should be compressed a little, carefully, so as to imitate the natural motion of these parts.

Authors disagree as to the amount of force allowable in forcing air into the lungs of a new-born child. Some have recommended a "forcible insufflation," while others contend that such a practice is fraught with danger to the child. It appears from a series of experiments that have been made in France on animals, and from observations relative to the human subject, that no very great force of insufflation is necessary to rupture the delicate air-cells, and cause a fatal emphysema of the pulmonary structure. In sheep, and in the dead human subject, the air-cells were ruptured by a force of insufflation not greater than that which may be made by a person of ordinary respiratory vigor, without any very violent effort.

To obviate the unfortunate accident of rupturing the air-cells of the lungs, the air should be thrown into the respiratory passage through a silk handkerchief folded double, or a fine napkin laid over the mouth of the infant.

In all cases of retarded, impeded, or suspended respiration immediately after birth, care should be promptly paid to the removal of the viscid mucus, which is usually to be

found lodged in the mouth and throat of new-born infants. In some instances the quantity of mucus is so great, and its quality so tough, that it is believed the child could not possibly breathe if the obstruction was not removed from the parts. In all cases, therefore, if there appears to be any difficulty whatever in regard to respiration, it is best to remove this mucus by means of the finger, surrounded by a handkerchief or piece of soft linen. If there is reason to believe that the mucus is also lodged in the throat and beyond the reach of the finger, it has been recommended that the child should be turned with its face downward, and the body raised higher than the head. In this position, the child's back, between the shoulders, is to be patted with the hand, and its body gently shaken, so as to disengage any matters that may be lodged in the trachea, and permitting it to flow out of the mouth by making this the depending part. At the same time, if the back is rubbed with the hand wet in cold water, the stimulating effect will aid in the expulsion of the offending cause from the throat.

Infants are sometimes born in a state of asphyxia, when, instead of lividity and swelling of the countenance, there is the opposite extreme, the face and surface of the body, generally, being pale, exhibiting a want of vitality. In such cases, it is of the utmost importance that the cord be not divided too hastily; on no account, indeed, should this be done until the pulsation has ceased. The viscid mucus should at once be removed from the mouth and fauces by the methods before mentioned; and it has been recommended to apply brandy, spirits of camphor, hartshorn, etc., to the mouth and nostrils, with the view of exciting the respiratory function. It is doubtful, however,

if such articles do any permanent good whatever, and they are certainly liable to harm. At any rate, it is better, I am confident, to sprinkle cold water upon the surface, and to make friction with the cold wet hand. This will set the blood in motion, and aid the vital powers incomparably more than the stimulants mentioned.

It is also advisable in these cases, if respiration is particularly tardy, to inflate the lungs carefully, according to the method before recommended. But the applying hot brandy, flannels wrung out of hot spirits, etc., which have often been used on such occasions, are worse than useless, and ought never to be resorted to.

Infants, in this condition, should not be given up too hastily. Numbers of cases have happened in which a half hour or more has elapsed before respiration has been established. Even a much longer period than thirty minutes has transpired in some cases before the breathing has been established.

The time will come, probably, when electricity will become so well understood as to enable us to make it a valuable agent in cases of still-birth and suspended animation. In the present state of knowledge, however, it is better, I think, to depend on the stimulus of cold water, frictions, and the other means to which I have already referred. But great care is necessary in the management of all such cases; and I have no doubt that many more infants have been killed by too meddlesome and injudicious management, than have been saved by the use of artificial means. The tendency in cases of this kind always has been to do too much. It is one of the greatest acquirements in art to learn when *not* to do.

WASHING AND DRESSING THE CHILD.

I have a few words to say here on these topics; but I must refer you to my Treatise on Children for a much more full and explicit explanation of them than the limits of this work would admit of. You can all of you who have need obtain that work, I trust; and surely, after you have borne a child, you will feel the greatest interest in learning all that it is possible for you to know respecting the best modes of rearing it.

In general terms, then, I remark, that a child should, soon after its birth, be carefully cleansed by means of pure water and the addition of a little mild soap. The water should not be either too warm or too cold; a moderate temperature, as from 70° to 80° Fahr., will be found best. The child should be *carefully* washed, I said; and in all that is done in handling it, you should remember that it is a frail, delicate thing. Nor need I hint to a *mother* that inasmuch as some one had to perform all of these small yet multiform offices for us, so should we be willing to perform them for others.

The *dress* should be loose, and merely sufficient for the purposes of warmth. The child should not be in any way *bound* with its clothing; nor should a binder or bandage be used.

LETTER XXX.

HYGIENE OF NURSING.

Lactation a Natural and Healthful Process—Rules for Nursing—At what time should Lactation cease?—Food and Drink proper during the Period.

You who reside in the country—as, indeed, most of you do—can hardly credit me when I tell you that it is getting to be quite fashionable in our large cities for a woman *not to nurse her own child.*

There is in some cases policy on the part of the physician, which lies at the root of this matter. "Why, madam, you are too weak," the fashionable pill-monger sagely says. "It will injure your constitution, and you cannot raise your child; you must have a wet-nurse."

Now, all this is very easy for a man to declare. Some say it from ignorance, no doubt, and some from other motives; for physicians, although as a body of men they are as honest as any other, are yet sometimes selfish, and do that which is dishonest and wrong. The selfish doctor knows, of course, very well where his money comes from. He knows—if he is not an ignoramus—that the mother, if she does not nurse her child, is more apt to become sick, so that she will need his services; and, what is more, she is more apt to become pregnant, in which case he will look for another job at midwifery, which pays well.

I would have every one of you to understand that the health of the unnatural mother, who will not nurse her child, suffers from her not fulfilling the order of nature in giving suck. Her system must inevitably get harm from not allowing it to go through the period of lactation naturally. Her life of dissipation, too, is poorly calculated to contribute to health, compared with staying at home and fulfilling the order of nature, as God designed she should do. But she gets her reward even here. There is no period of woman's life in which she has so great enjoyment, such perfect physical health, as when she is nursing the offspring of her own blood. Her shattered nerves and broken health are poor pay for the so-called enjoyments of a dissipated life.

But it will be said, there are cases in which it is impossible for a mother to fulfill the office of nursing. She may be physically unable; that is, she may not have any milk to give it; her health may be so feeble, and her constitution so much depraved, that it would not be admissible to do so. All this I admit; but such cases are the exception and not the rule.

What are we to think of the mother who voluntarily permits her child to nurse at another breast? How are we to regard the morals of such a mother—one who willingly allows another person to gain the affections of her child—for it always becomes more attached to the one who nurses it than to its own parent? Besides, too, the character of the one who suckles the child is, to a great degree, stamped upon it, and that indelibly, too. Is a mother, then, willing that the child shall take on the character of another, and of one whose disposition and mental peculiarities she probably knows nothing? For one, I

cannot envy the man who has a wife that can willingly resign her child to another to nurse.

Rules for Nursing.—After the birth of the child, the mother having rested herself some hours from the pains and anxiety she has passed through, it should be put to the breast with the view of exciting the mammiferous glands to their proper and healthful action. This is better for both mother and child. It may be necessary to make the attempt a number of times, and perhaps for days before the lacteal secretion will be found to take place. But letting the child every now and then make the effort to get milk will be one of the most efficient means of inducing it to flow.

How often to Nurse the Child.—This is a question of great importance; great not less to the parent than the offspring, but one which is by far too much neglected.

It may not be possible to ascertain exactly at what periods it is best to give a child the breast; but one thing may be predicated with the greatest confidence, which is, that there should be a *regularity* in regard to it. To give the child the breast every half hour one day, and then, perhaps, the next, for the mother to go away for many hours, is certainly not a good practice.

I am led to believe, after having spent a good deal of thought on this subject, that to nurse a child once in about three hours, is perhaps as good a plan as can be fixed upon. Some have regarded four hours as a proper period; but one thing I am satisfied of, that the three hour rule is a good one; there is far more danger of nursing the child too often than there is from the opposite extreme.

It is common, I believe, for mothers to allow the child to take the breast during the night time. I am of the

opinion that this practice, likewise, is not a good one. How much do you become fatigued, worn down, as it were, many of you, by allowing the child to take the nipple as often as it chooses in the night? In such cases, how much better you perceive it would be, to rest during the proper hours, so that when the morning comes, instead of being unrefreshed and stupid, you feel buoyant and elastic as a deer.

I am willing, however, to admit that it is probably the better rule for the child to be nursed somewhat late at night; for example, when you retire to rest; after that it should not be allowed nourishment till morning.

At what time to cease Nursing.—This, too, is a question which deserves a careful consideration—one on which the health of both parent and offspring very much depends.

It is probably true that women in the civilized and refined parts of the world do not, as a general fact, nurse their children for as long a period as is the case among the savage nations.

The Indian women of our own country, it would appear, are in the habit of continuing to suckle their children two years or more before weaning them. Nor do they at all allow of cohabitation during this period—a practice which might well be imitated by the more enlightened portions of the human race. "I shall not undertake to determine," says Dr. Rush, "how far the wholesome quality of the mother's milk is increased by her (the Indian woman's) refusing the embraces of her husband during the time of giving suck." If, then, the mother's *milk* is to be deteriorated by the practice referred to, her health, also, must suffer in a corresponding ratio.

It would appear, also, that in Bible times the period of

nourishing children at the breast was prolonged to a much greater period than is common in these latter times, for we read of the giving of suck *three* years.

Reappearance of the Menses.—Some have supposed that the period of nursing should be graduated according to the reappearance of the catamenial discharge, because, as they have supposed, the milk is deteriorated by that circumstance.

Let us inquire, in the first place, at what time after a woman has given birth to a child, does the menstrual function ordinarily commence?

Some authors tell us that this does not happen for nine or ten months, usually. Dr. Meigs tells us that he expects his patients "to become unwell at the seventh month of lactation." "But more frequently than is generally believed," says Dr. Tilt, "the periodical flow coincides with the secretion of milk as early as the second or third month of lactation, and this in perfectly healthy women; and I am in a great measure able to confirm the assertion of certain authors, that menstruation often continues regularly from the beginning of lactation." These, however, are exceptional cases, the rule being that a number of months, ranging probably from seven or eight to fifteen, elapses before the menses reappear.

But it is by no means proved that lactation should be made to cease as soon as the woman has her monthly discharge. I have myself known numbers of cases in which nursing was continued for some months after, and apparently with good results to both mother and child. How is it in those cases where the menses do not cease at all, or, at farthest, come on at a much earlier period than it would

be advisable to wean the child? Must we be obliged to wean the child in these cases? I think not.

Dr. Hassall, of London, we are informed, examined with a microscope the milk of a lady taken from her on the second day of menstruation, which had come on for the first time at the ninth month of lactation, and he reported that the milk was perfectly normal in quality.

Dr. Tilt informs us that, having carefully interrogated one hundred women in whom menstruation had returned at different periods of lactation, he learned that the quantity and quality of the milk were varied as follows:

The same in	45
Diminished only at the menstrual time	8
Completely checked in	1
Impoverished only at the menstrual time	5
Impoverished then and thenceforth	2
Increased at the menstrual time	24
A rush of milk afterward	15
	100

In making the above observations, the thriving of the children was the estimate of the quality of the milk. By "impoverishment," was meant that the milk looked like whey, and sickened the children.

My belief, then, you will understand to be, that some other criterion than the reappearance of the menses is to be looked for in regard to the time you should continue to suckle a child. Your own health, the infant's health, the season of the year, the stage of teething, and a variety of circumstances, are to be taken into the account. And I am fully persuaded that the mere fact of the menstrual discharge coming on, is not a sufficient reason why the child should be weaned. Moreover, weaning should be a

gradual process, which it cannot be if a woman must cease to nurse it as soon as the menses come upon her.

Food and Drink proper during Lactation.—As a general principle, it may be stated that whatever is best for the constitution of the mother, is also best for that of the child.

Every thing that goes to injure the mother during the period of lactation operates powerfully upon the mammary secretion, deteriorating it in the same proportion that it acts as an unfriendly agent upon her. This secretion, too, be it remembered, is one of the very first of the fluids of the body to become affected under unfavorable circumstances. We know how quickly the milk of a distillery-fed cow becomes impoverished and unhealthy, when the improper food is given to the cow; and precisely the same great physiological principles hold good in the woman as the animal.

Suppose you have a fine cow, to which you have become very much attached, and that has a fine calf; or even suppose you have a sow, to which you have devoted a more than ordinary share of attention, and that she has a fine brood of pigs. It is naturally to be supposed that you would take as much pains as possible with the cow, that she might give good milk for the calf; and if you have a fancy for raising pigs, you would be equally careful in regard to the sow. We will suppose you think there is danger that the animal will not produce milk enough for the required purpose. In such a case, would you give it tea, coffee, or porter to drink? Most assuredly you would not; nor would you consider any woman in her right mind who would. Now, it is just as improper and inconsistent for *you* to take these articles, any one of them, with the

view of improving either the quantity or quality of the milk, as it would be to give them to animals for the same purpose. Farmers can tell you how much better it is for animals, when they are giving milk, to have pure water to drink; and the purer and softer it is, the better does the animal thrive in every respect.

I will not deny that a woman probably needs more fluid when she is nursing than she does at other times, and I presume that she feels a desire for more; if so, she can take it. But surely no one will tell me that there is any thing in the wide world that will at all compare with pure water as a means of quenching the thirst.

In nursing, as well as in all situations, you will find the diet to have a great influence in regulating the desire for drink. If you eat salt, and highly seasoned or sweetened articles, you will experience much more thirst than you would if the diet were more simple. A stimulating diet causes a degree of fever in the body; and water being the best and most natural of all substances for curing fever, nature sets up a demand for it. Remember, then, when you eat any thing that makes you *dry*, you are doing unwisely, because you are causing a degree of gastric fever, greater or less.

I need not, I think, go any more into details concerning what you should eat and drink while giving suck. The great thing is to do the best possible for your own health, and that also will be best for the child. You should not eat or take nourishing drink any oftener than you would do at other times, nor should you overdo in quantity, because you think you have two to support.

LETTER XXXI.

OF TWINS, TRIPLETS, ETC.

Twins, Triplets, and Quadrigemini of comparatively rare Occurrence—Of the Signs of two or more Children in the Womb—Management of Twin and Triplet Cases—The Nursing of Twins.

It sometimes happens that the woman gives birth to two or more children at the same time. When a mother has twins it is usually the case that both children are smaller than the natural size; they are not, however, both of the same weight; one may be of moderate size, while the other is still more diminutive. But cases have been known to occur, in which both children were above the natural standard. The average weight of twelve twins, examined by Dr. Clarke, as quoted by Dr. Burns, was eleven pounds the pair, or five and a half pounds each, bringing each child considerably under the average weight of a child born singly. Usually the two children, taken together, weigh considerably more than the one at a single birth.

Twins are fortunately of comparatively rare occurrence; so much so as to render it difficult to establish the proportion between them and single births; the cause of their production is evidently mysterious, and altogether beyond the power of human control.

In the Middlesex Hospital, London, according to Dr. Dewees, there was on an average but one case of twins in

about ninety-one of births. In Dublin the proportion is greater; in the hospital of that city it was found that one woman in fifty-eight had twins; in the Westminster Hospital, in London, one in eighty; in Dr. Burns' practice, one in ninety-five; in La Maison d'Accouchement, in Paris, there were, in twenty years, thirty-seven thousand, four hundred and forty-one single births, and four hundred and forty-four twins; in the l'Hospice de la Maternité (Hospital of Maternity) of Paris, the proportion was about one in eighty-eight, according to one return, but according to the testimony of Madame Boivin, of the same institution, the proportion was only one in about one hundred and thirty or forty, while in that of La Maison d'Accouchement the proportion was about one in ninety-one. Dr. Dewees regards, that in this country the proportion of twin cases is, on an average, one in seventy-five. In Wurtemberg, in Germany, there were, according to Dr. Burns, twins once in about eighty-six cases of births.

Triplets.—These are very much more rare than twins. In the returns of the cases in La Maison d'Accouchement, as furnished by Baudelocque, there appears to have been but one in more than eight thousand cases; in the returns of Madame Boivin, of the cases in the l'Hospice de la Maternité, there is one in rather less than seven thousand. In La Maison d'Accouchement there were, according to Dr. Burns, in twenty years, thirty-seven thousand four hundred and forty-one single births, and five triplets. At Wurtemberg, in Germany, there were triplets once in about seven thousand.

Quadrigemini.—Instances of four children at a birth must be exceedingly rare. It is not uncommon to find the announcement of such cases in our public prints; but

the truth of these ought evidently to be questioned in most cases; and yet such an occurrence has been known to take place. An instance was said, on good authority, to have occurred in Paris, in October, 1823. Dr. Dewees cites a German author, as giving the case of a woman in Strasburg, who had eleven children at three deliveries, making, of course, four of each at two of the births, and three at the other. The same author quotes from the Albany Argus what he designates an account of "unparalleled fecundity." Dr. O. F. Paddock, a respectable physician of Fort Covington, Franklin County, gives, in the Franklin Telegraph, an account of an extraordinary birth of five children at one time, from the same mother—three daughters and two sons. Four of them were born alive, but lived a short time. The birth was premature three months, but they were perfectly well-formed and well-shaped. The average weight was about two pounds, and not much difference in their size. Their parents had lately emigrated from Ireland, and arrived in this country in August, 1825. This case is rendered more remarkable by the fact that the mother of these five was delivered, on the 20th of February, 1826, of two; making, in the whole, seven children in less than nine months. The last were born on the 25th November, of the same year.

The same author quotes also another account of remarkable fertility from Dr. Ryan, editor of the London Medical and Surgical Journal. This learned gentleman was called to a patient, aged forty-one, of a sanguine temperament, who had menstruated at the age of twelve, and married between eighteen and nineteen. She had a seven months' child in the eighth month of her marriage; had twins about the fourth month three times during the year 1829,

and again, December 31, when she was attended by Mr. Whitemore, of Cold Bath Fields, and delivered of two infants; and on January 28th, 1830, she was attended by Mr. Thomas, of Bagnigge Wells Road, and delivered of an infant, which he considered of the same age as the preceding. On the seventh of June, 1830, she aborted at the third month; and on the ninth, a second fetus was expelled; and as there was no discharge whatever from that time to the period when Dr. Ryan wrote, she considered herself still pregnant. The abdomen was about the size of a woman's in the fifth month of utero-gestation. She had twenty-four children in twenty-one years, and menstruated regularly before marriage, and was always in good health when suckling, and ill when breeding; and always became pregnant about the fifth month of lactation. Her mother was seventy years of age, and in good health; she had eighteen children born alive. A relation of her husband had thirty-two children, including miscarriages.

Dr. Dewees gave a case some years since, of a lady with whom he conversed, who was then in her thirty-eighth year, and who declared to him that she had been pregnant two-and-thirty times. Of this number eleven children had been born alive, and at the full time. She repeatedly miscarried of twins, and no abortion was less than near three months. She had been married nearly twenty-three years.

As regards the number of fetuses that may exist in the womb at a time, fable has exerted itself to an almost endless extent; thus, the story of the Countess of Hannenberg may be cited as an instance. She, in consequence of a curse pronounced by a beggar-woman, to whom she had refused money, was delivered of three hundred and sixty-

five fetuses; that is, one for every day in the year, in fulfillment of the wish of the offended mendicant, which was, "that she might have as many children at a birth as there are days in the year." The curse was said to be accomplished; and, in proof of it, the fetuses are shown to strangers that visit the museum at Leyden. This fable did very well for the year 1276; but, if such cases were said to happen now, they would be more scrupulously investigated, and more rationally accounted for. In the case first noticed, the sexes were pretended to be discoverable, and all the males were called John, and all the females Elizabeth, at their baptism.

Signs of Twins.—A vast deal of thought and investigation have been put forth on the subject of ascertaining twin cases before birth. The physician is often consulted on this subject; but, it need hardly be said that the wisest and most experienced can hardly do more than *guess* upon so important a matter. Dr. Dewees tells us, we should always answer the question in the negative, and for two reasons, especially; first, because it is impossible to decide it positively; and, secondly, if it could be so decided, it never should be, as much mischief might arise from the uneasiness and fear it might produce.

It may not, however, be wholly uninteresting to our readers to know something of the signs which have been supposed to indicate the presence of more than one child in the uterus. Women who are more than ordinarily large, are apt to suspect themselves pregnant with twins; we very often see such cases, and yet, in few instances, comparatively, the surmises of such patients prove true; they are in general happily disappointed, for no mother, I think, would prefer to run the greater risk of bearing twins.

If a woman be unusually large in the early part of pregnancy, and increase proportionably to the full period, there is some reason, as Dr. Denman regards, that she will have twins; but people will vary very much in regard to what constitutes "large," and what "small," in reference to the size of the abdomen in pregnancy: a few will suppose themselves very large when they are, in fact, only of common or moderate size. Particularly in cases of first pregnancy patients are apt to be misled on this subject; there can be no surprise if conjectures on the subject of twins often prove fallacious.

The abdomen of all women with child is in general uniformly distended, without any inequality. It sometimes, however, happens that the tendons, which form what is called the linea alba, which leads from the navel to the middle of the ossa pubis, being less distensible than the sides of the abdomen, which are muscular, divide the abdomen, as it were, into two equal parts by a raphé or indentation through its inferior part. This presumed sign of twins is as ancient as the time when the human uterus, like that of quadrupeds, was supposed to be divided into cornua, a child being thought to be contained in each horn. But as the form of the human uterus is now well understood and known to be equally distensible to its contents, whatever the form of the abdomen may be, unless it is constrained by external means, even less regard is paid to the form of this than to its degree of distention, when we are judging whether it be probable that a woman is pregnant with more than one child.

Women with child—those who have passed through one or more previous pregnancies—are sometimes apprehensive that they have twins, from a greater, a more distant,

or other peculiar motion they feel during the period. But sensations of this kind, it hardly need be said, are generally fallacious, as affording any probable evidence of there being more than one child in the uterus. Besides, it is to be remembered, that women never experience the same sensations during any two pregnancies.

Tardiness of labor has sometimes been considered a sign of twins; but this may be occasioned by so great a variety of circumstances, it cannot be at all relied on as an evidence of compound pregnancy. It is true, however, that when two or more children are to be born at a time, the labor of the first is almost universally slow; and this slowness is to be attributed to the greater distention of the womb.

There is one method of which I should speak, that some, in modern times, place much reliance upon in ascertaining the presence of twins in the uterus. Dr. Kennedy, of Dublin, and others, have affirmed that the motion of two fetal hearts may be ascertained by means of auscultation; others again have less confidence in this matter, so that on the whole, it is doubtful whether much reliance is to be placed upon this method. It would be difficult, I apprehend, in most instances, for two practitioners to agree upon this point.

Management of Twin Cases.—The labor of a woman pregnant with two or more children begins, in all respects, like that in which there is but one; its progress, however, is not in general so regular or rapid. The reason why labor is more tedious in these cases is, that neither child can be subjected so well to the expulsive force of the uterus as when there is but one fetus in its cavity.

It is inculcated as a rule among physicians, to keep a

patient as long as possible ignorant of there being more than one child, when this is known. But in almost every conceivable instance, the physician is not aware that he is encountering a case of twins until the first child has been born. After the first child is expelled, we may suspect the presence of another from the following circumstances: first, when the child is small in comparison with the abdomen of the mother; and second, when we find the uterus still large, extending high in the abdomen, and not contracted into a comparatively small and hard tumor, as is usually the case at single birth.

It happens in the greater number of twin cases, that while the physician is waiting for the pulsation in the umbilical cord to cease, or is employed in tying it, or waiting for a pain to expel the placenta, the patient complains with more than ordinary earnestness; on examination it is then found that there is a second child on the point of being born, or the bag of waters may be protruding with more than ordinary firmness, so that almost instantly on their breaking, the child is expelled, and this not unfrequently before there is time to give either the mother or friends notice that a second child is to be born; and fortunately it happens in the great majority of cases that, save the exception of the labor being more protracted and severe in the beginning of those cases, the ultimate births are effected with as little danger and trouble as in the average of single cases.

The rules of practice in twin cases, after the birth of the first child, are plain and not at all ambiguous, as some authors would have them. After the expulsion of the first child, one of two things must happen; first, that pretty severe pains will quickly ensue, and if the position be nat-

ural, quickly cause the birth; or second, there will be an entire suspension of pain. In the first case the labor must be conducted in all respects the same as if it were an original one; nor is it at all to be interfered with so long as there is any reasonable prospect that nature will prove adequate to relieve herself; and this she is generally able to do. When pains follow the expulsion of the first child, there is every reason to believe that they will in proper time accomplish the birth of the second, because it will receive the whole influence of the expulsive efforts of the uterus, whereas before it was expended upon both fetuses, and because the subsequent pains will be more powerful, since the uterus is now smaller, and its contractions consequently more perfect; and lastly, because the parts have been already dilated by the passage of the first child.

But if there is a suspension of pain, the rule of practice is equally plain as in the former case; if there should be flooding—which will seldom happen—we are to proceed as we would in any other case of hemorrhage preceding the birth of the child; we are to endeavor to arrest the hemorrhage, and if this cannot be accomplished—which I think it usually may be—we are driven to the necessity of delivering the child by means of art. If there be no hemorrhage present, we are to solicit the contraction of the uterus by frictions and kneading on the abdomen, by cold, wet compresses freely used, by general ablutions; the cold hip-bath, perhaps, in some cases, the frequent drinking of very cold water, taking small pieces of ice into the stomach, and by cold injections in the bowels. But we may safely allow nature to rest herself somewhat before we enter upon these means. A meddlesome midwifery, we should remember, is always bad. As things

have been in the healing art, nature has been hindered in her processes, probably scores of times, by manual operations, where she has been really aided once.

The Placenta.—Usually in twin cases, each child has its own placenta, but this is not always the case.

When there are two placentæ, they are usually connected together; sometimes, also, they are entirely separated.

The number of placentæ is usually in proportion to the number of children. To this rule there are also exceptions. A single placenta and a single cord has been found in a case of twins, the cord branching off into two, some distance from the after-birth. In some rare instances, likewise, the cords are found so closely twined together, that they have the appearance of one.

Before any attempt is made to deliver the placenta, when we have reason to suspect there is another child in the womb, or where we have ascertained such to be the case, we should, at the proper time, separate the cord of the first child, and place a ligature on the part next the mother. The cut extremity of the cord, in such cases, is supposed to yield a more than usual quantity of blood, even to the exhaustion of the second child.

When the placentæ are separate, that of the first child should not be delivered before the birth of the second child. Should it be so delivered, there must necessarily follow a considerable discharge of blood, which might amount to a profuse or fatal hemorrhage. But in some instances the after-birth has been expelled by the natural efforts, without any considerable effusion of blood. In some cases of hemorrhage, when there is only one child, the placenta is thrown off first, and yet without any detri-

ment or danger, such as is usually looked for in such cases.

In cases where it is necessary to extract the child by art, it is also generally looked upon as necessary to deliver the placenta by the same means; but such is not necessarily the case. If there is no hemorrhage, or other cause of alarm, there is no more reason for giving assistance to deliver the placenta than if only one child had been present; we ought either to wait for the spontaneous operation of nature, or, at most, give very little assistance, precisely as we would in a case of single birth.

Whenever it is found necessary to give assistance in the matter of removing the after-births, we are to recollect that the two placentæ should be extracted together, or in quick succession, as the patient would not be freed from the peril of her situation if we did not proceed in this way. If the hand is to be introduced into the uterus, it should not be withdrawn till both the placentæ are detached, and ready to come away. If we are to give assistance by making traction at the cord or cords, we must be careful that each shall bear an equal proportion of the force we think it advisable to use.

We are not to be alarmed if more blood is lost in twin cases than is usual at single births. The discharge is commonly greater in the former cases, and longer continued than in the latter.

Nursing of Twins.—Should a mother undertake herself to suckle her own children, when both live, in twin cases? If she has strength enough, and a sufficiency of milk, it is better that she do so. No one else can be expected to feel that interest in a child which a mother naturally does. Inasmuch, then, as the period of nursing—if every thing

be properly managed—is that in which woman enjoys probably better health and a greater immunity from disease than at any other time of her life, let her, I say, if it be at all within the range of consistency, nurse her own child; and if there is need of aid from any source, it is better, as a general thing, to depend upon pure cow's milk, with the addition, perhaps, of a very little pure, soft water, but of no other substance whatever, not even sugar, which is so frequently resorted to. By this simple means, in connection with prudent management throughout, the child may be nourished; wholly, if the mother is not able to give it suck, or in part, if it need more nutriment than she is able to afford it.

LETTER XXXII.

TREATMENT OF AFTER-PAINS.

The Nature of After-Pains—The different Kinds—Their Causes—Treatment—The great Value of Water-Cure.

USUALLY after delivery, the woman experiences more or less pain in or about the abdomen, generally in the womb or the back, constituting what is termed "*after-pains;*" these are called after-pains, because they occur after delivery.

It is an important fact, one well worth considering, that as a rule, no after-pains worth mentioning are experienced during the first confinement. Do women become weakened necessarily by giving birth to children? Are their cares and duties too many as they become mothers, in the present state of society? Are the plans of medical treatment, such as are usually adopted in childbirth, calculated more and more to undermine the constitution? Are people almost universally in the habit of debilitating themselves by connubial excesses in the married state? These are questions of vital importance to all who expect to be mothers.

After-pains proceed from the contraction of the uterus, caused by the presence of bloody clots, the blood having oozed from the orifices of the torn vessels, and becoming coagulated in its cavity. The pains come on usually very

soon after the expulsion of the after-birth, and may last a few hours, or for a number of days, according to the nature of the case and the treatment employed. Each severe pain usually expels a clot; they are often increased when the child attempts to suck, a fact showing the great sympathy existing between the uterus and the mammary glands.

After-pains may also be caused by costiveness, or, rather, by the presence of hardened fecal matter in the colon. They may also proceed from flatulency.

Dr. Dewees mentions one kind of after-pains of very distressing character, which he had not seen noticed by other writers. He met with a few cases, and I have myself seen one or two instances of the same kind. It is a most severe and constant pain at the very extremity of the sacrum and coccyx (the extreme lower portion of the spinal column). It begins, Dr. Dewees says, the instant the child is born, and continues, with the most agonizing severity, until overcome by the rapid and liberal use of camphor and opium. The sedative effect of cold water is, I hold, altogether better than these so-called remedies. This pain, it is declared by the patient, is vastly more insupportable than the pains of labor, for it is as intense in character, and holds on almost without intermission, which the pains of labor do not.

After-pains are, no doubt, sometimes rendered much worse than they otherwise would be, by improper management at the time of confinement; if the labor is hurried in an unnatural way, the probability of more severe pains is evidently increased; especially if the after-birth is hurried away before the uterus has sufficient time tc contract itself, they are rendered more protracted and se-

vere; the better the womb contracts, the less the blood will flow into its cavity.

We should be careful always to distinguish these pains from inflammation of the uterus, peritoneum, or other parts within the abdomen. After-pains are remittent; the abdomen is not particularly painful to the touch; the lochial discharge is not obstructed; the patient has no shivering; milk is secreted in due time; there is no general feverishness worth mentioning; and the pulse is not affected. But in case of inflammation, the opposite of these symptoms obtains. There may be, it is true, and sometimes is, more or less increase of heat when there is simply after-pain, but this heat does not at all amount to inflammation.

There is still another kind of after-pains, different somewhat from any I have yet mentioned. They are called spasmodic. The uterus, like all other parts of the human system, and especially those which are highly endowed with nervous sensibility, is liable to take on spasmodic action. These spasmodic pains are sometimes very violent; the patient writhes in agony, tossing herself from side to side upon the bed, and sometimes it is necessary for a number of persons to hold her. These symptoms sometimes become so violent as to end in convulsions, it is said. Spasmodic after-pains appear to happen, for the most part, with those who are excessively nervous, and particularly with such as have been in the habit of using strong tea and coffee, opium, and other narcotic substances. The fashionable tea and coffee drinking, and the use of morphine and other preparations of opium, which have been so much resorted to in this country these later years, depend upon it, have a great deal to do in these things.

Treatment.—How are we best to manage these formidable difficulties in midwifery practice? Shall we stupefy the patient with camphor, opium, or prussic acid, as many have done? Shall we do better than this, and tell our patients, as many do, that these pains are natural, and should not therefore be interfered with, and are to be borne with as much patience as the sufferer can put forth? Or shall we adopt a process which is, on the one hand, more potent, more effective, and more powerful than any other known to quell pain and spasm, from whatever cause they may arise; while, on the other, it does not at all injure the constitution, or leave after it any bad effects?

Dr. Dewees tells us it must be admitted that neither camphor nor opium is always successful in calming these distressing contractions of the uterus. They sometimes persevere with great obstinacy, even after the faithful trial of both these remedies; while, in other cases, no form of opium can be made to suit the peculiar idiosyncrasy of the patient, and to some the camphor is absolutely disgusting.

We have a remedy incomparably more effectual than either or both of these, and which will act in the most friendly manner with every patient—pure water, tepid, cool, or cold, judiciously applied, according to the exigencies of the case, is a hundred-fold better than all other remedies combined in subduing the pains in question.

What substance in nature that will at all compare with water in arresting hemorrhage? There is nothing. So also in regard to securing a proper contraction of the uterus, the same principle holds good. We place wet cloths upon the abdomen, the generative parts, the thighs, and a wet sheet about the trunk of the body, if need be,

in order to secure the desired effect. Even placing the hands in cold water will, by sympathy, aid in the result.

In the slighter cases of after-pains, the frequent laying on the abdomen cold wet compresses, the same upon the back, together with frequent drinking of cold water, and the use of the accustomed baths—such as are always taken, even when labor-pains do not appear—will in general prove sufficient. But in many cases a far more heroic treatment will be found necessary. Many times in the twenty-four hours we may have to persevere in the water appliances, particularly the shallow-bath; the common wash-tub, or the sitting-bath tub, answer very well for this; the patient sitting in the vessel, the feet, of course, being left outside, she is rubbed all over smartly with the wet hand, there being one or more assistants, herself aiding in the operation somewhat; in this way she is rubbed until the desired effect is obtained. No matter if it makes her chilly and shake, as it often does, for it is much better to be shivering with cold, and suffering in this way, than to be writhing and groaning under the effects of these terrible pains. I have myself, with my own hands, aided in giving these baths by the half hour at the time, and many in the course of a day, and in such cases we have succeeded—usually in a few hours—in getting the mastery of the pains. I cannot conceive of a case in which this treatment, if properly managed, must not succeed. I know that in some cases, where persons have been much injured by narcotic substances, and in which the agony amounts to spasms and convulsions, perhaps, it will be found no boys' play to cure the case. But I have yet to see the first one in which these remedies will not succeed, and I trust the time is not far distant when both physicians and

the people at large, all over this country, and the whole civilized world, will understand and be able to apply, in a very good degree of perfection, these simple and yet immensely valuable means for relieving pain.

But to proceed; if a patient is too weak to sit up for a half-bath, we must do the best we can with her in the recumbent position, and by dexterous and persevering management, a great deal may be done in these cases. The wet sheet, folded once each way, and then slipped under the patient, so that it can be lapped over the whole trunk and pelvis, and the frequent renewal of the wet compresses under the sheet, upon the abdomen, genitals, and thighs, are invaluable means. The washings of the surface may be repeated as often as is necessary, and the wet sheet should be always changed before it becomes too clammy and warm.

But it is fortunately the order of nature, that where there is great debility not much pain is experienced. If a patient experiences a great deal of after-pain, we may know that she has a pretty good amount of vitality in her organization, and that she can bear a large amount of treatment, sufficient to bring about the desired result.

Water injections for the bowels are also valuable in these cases. I do not think it best to use the water very cold. In one very obstinate case, where the most agonizing after-pains had gone on for hours before I saw the patient, we used, among other means, frequent clysters of water, at about 70° Fah. with excellent effect. Nor would I be afraid to use very cold clysters in such cases.

Some have recommended vaginal injections in strong terms as a remedy of after-pains. It has indeed been affirmed that occasional cold injections to the uterus prove

a *sovereign* remedy for them. But no one of much experience has testified to this. It will be found, I think, by those who have put forth these strong statements, that when they have gained a sufficient amount of experience to enable them to form a good judgment upon these matters, they will find, I am confident, that a much more powerful and general treatment will be necessary in those severer cases. No single application, however powerful, can of itself succeed. But if I am myself in error on this subject, I shall be most happy to become convinced of it, for I love the *truth* better than every thing else; better even than my own opinions, however strongly and confidently expressed.

I would prefer the tepid vaginal injection—say at a temperature of from 70° to 80° Fah.—rather than the cold. If we have an aching tooth, its nerves all sensitive and bare, we do not take *cold* water into the mouth, but that which is tepid. We repeat this pretty often, and at the same time rub the face, neck, and other adjacent parts with the coldest water we can get.

If we have a cut and bleeding finger, we do not immerse the wound in cold water, or put cold water upon it, to arrest the bleeding, but we immerse it in tepid water, and make our cold applications some little distance from the wound, as upon the arm and elbow; thus we secure our object in the better way. If we are to treat a felon, we may immerse the hand and arm in cold water, leaving the extreme part, at which the agony is felt, out of it; we may have a wet compress about the painful member, but the greater and more effective applications must be made on other parts, contiguous to the one affected. From these well established principles I

infer that the vaginal injections, whatever may be claimed for them, are of minor importance, when compared with the external and more general applications to which I have referred, as a remedy for after-pains. It is to be remembered, likewise, that patients, from the extreme sensitiveness and soreness of these parts after delivery, dread very much applications of this kind. The external applications are soothing, pleasant, and wonderfully effective in relieving soreness, but not so with the internal applications.

Thus, then, it will be perceived, that I place great reliance upon the shallow-bath, tepid, cool, or cold, with prolonged friction by the wet hands, the sitting-bath, the cold wet compresses, often repeated, the wet girdle, cold wet cloths upon the thighs and back, the folded packing sheet, with covering sufficient to keep the patient comfortable, tepid or cold clysters, and water-drinking, together with good nursing throughout, as a remedy for the distressing affection of which I have been treating.

LETTER XXXIII.

THE LOCHIAL DISCHARGE.

The Mosaic Law concerning Purification of Women—Nature of the Lochia—Excessive and Offensive Discharge—Treatment of Suppression of the Lochia.

We read in the New Testament, in reference to the birth of the Saviour (Luke ii., 21, 22), that "when eight days were accomplished for the circumcising of the child, His name was called Jesus, which was so named by the angel before He was conceived in the womb;" that "when the days of her purification, according to the law of Moses, were accomplished, they brought Him to Jerusalem, to present Him to the Lord."

These passages refer to the Mosaic law (Leviticus, chap. xii.), which is as follows:

"And the Lord spake unto Moses, saying, Speak unto the children of Israel, saying, If a woman hath conceived seed, and born a male child, then she shall be unclean seven days; according to the days of the separation for her infirmity, shall she be unclean.

"And in the eighth day the flesh of his foreskin shall be circumcised.

"And she shall then continue in the blood of her purifying three-and-thirty days; she shall touch no hallowed thing, nor come into the sanctuary, until the days of her purifying be fulfilled.

"But if she bear a maid child, then she shall be unclean two weeks, as in her separation: and she shall continue in the blood of her purifying threescore and six days."

This law refers to what is called in medical science the *lochia*, or *lochial discharge*, the term being derived from a Greek word signifying "a woman in childbed."

After the birth has taken place and the placenta has been removed, the woman experiences a discharge from the womb, which is at first red in color, consisting, probably, of little else than blood; afterward it acquires a greenish hue, possessing a peculiar and disagreeable odor.

The lochia is considered purifying in its character. It is a natural discharge which oozes from the orifices of blood-vessels, laid open by the separation of the placenta from a portion of the internal surface of the womb. In all cases wherein a wound is made in the living body, or wherever the blood-vessels are by any cause laid open, there must be necessarily more or less discharge before the healing can be fully accomplished; and the same principle holds good in the womb as in other parts of the body.

In quantity, the lochia varies much in different cases; it may be three or four times as abundant, apparently, in one case as in another, both patients recovering, however, with equal facility or difficulty.

The length of time varies also as much as the quantity of this discharge. It may last for a few hours only, for days, but more commonly for weeks; fourteen to twenty-one days may be stated as its usual duration. Something, I think, depends upon the treatment; cleanliness certainly has its effect in these cases. If a woman wash herself three or four times daily, and keep herself at all times as strictly clean as the circumstances will admit of, the pro-

cess of healing must be materially hastened, the discharge rendered smaller in quantity, and less offensive in character.

Excessive Discharge.—From various causes the lochia sometimes becomes excessive in quantity. More anciently, when the humeral pathology was much in vogue, this discharge was studied with more attention than in modern times, and our forefathers in medicine may have gone to an extreme in this matter; but certain it is, the importance of the lochia should not be overlooked.

A piece of placenta retained may augment the flow of the discharge. If the patient experience vomiting, very offensive and too great a quantity of lochia, or if very severe after-pains come on, there is some reason to suspect that such is the case; so, also, portions of the membranes may have been retained, causing some degree of irritation. Any thing which debilitates the system, such as too much lying in bed, overheated rooms, too much sitting up, walking, or other exercise, and especially too much excitement in the way of seeing company, gossiping friends, etc., may likewise cause an excessive discharge. In those cases where a portion of the placenta is retained, removing it is often considered the best remedy; but according to one very able author and practitioner, Dr. Blundell, "unless the symptoms are very urgent, it is better to refrain from manual operations; left to its own efforts, the uterus will, perhaps, more safely clear itself."

Treatment.—In all these cases the general principles of management are plain and easily understood. We must, of course, as far as possible, remove the causes of the difficulty; we must also treat the system constitutionally in order to improve the general strength. Cooling wet com-

presses upon the abdomen and genitals, frequent ablutions, the sitting-bath, and in some cases the packing wet-sheet, will prove a highly useful means; vaginal injections of water, tepid injections in the bowels, and drinking of pure, soft water, are also to be recommended.

Offensive Discharge.—There is one condition of the lochia which is very troublesome from its offensive smell and extremely loathsome character. In such cases the red discharge ceases and is succeeded by a profuse watery one of a greenish color, and which is sometimes called by women "the green water;" it is frequently so acrid as to excoriate the parts upon which it runs. It is often attended with a good deal of general debility, causing, not unfrequently, a considerable degree of hectic fever.

The water processes, practiced in a manner suited to the exigencies of the case, cannot be too highly recommended or too much praised, as a means of purification and cure in this offensive and troublesome malady.

Suppression of the Discharge.—Women, in general, very much fear a sudden cessation of the lochia, and for the reason that it is generally well understood that this occurrence is attended with circumstances of an unfavorable character. But while patients should, on the one hand, always be careful and considerate in matters pertaining to health, they should, on the other, not become at once frightened at every little cessation of the discharge. As I have before said, it may cease of itself spontaneously, and without harm to the system, within a few hours after birth. Dr. Good, indeed, tells us "that in some women who have healthy labors, there is no lochial discharge whatever, the blood-vessels of the uterus contracting suddenly and closely as soon as the red blood ceases to flow." This cele-

brated author points out an example of this kind that occurred to Professor Frank, even after a third natural delivery; the patient, moreover, having been from a girl as destitute of menstruation as afterward of lochia; yet her health was in no respect interfered with.

Diagnosis and Treatment.—If thus, on examination, we find that there is no increase in the frequency of the pulse, or other unfavorable symptoms, no fear whatever need be entertained. If the patient has taken cold, causing an inflammation of the womb, an accident which may be known by sensations of chilliness along the spine, accompanied, perhaps, with general rigors, by the roundness, hardness, and tenderness of the womb, which may be easily felt through the abdominal coverings; and, if added to all these symptoms, there is great heat of the skin and frequency of the pulse, rising to 110°, 120°, 130°, or even more; then we may know that the suppression is a morbid one—one, too, which if not promptly treated, may soon end in death.

Patients, under such circumstances, have great fears of cold; they bundle themselves up, and heat their systems in all manner of ways, as if their physical salvation depended wholly upon such a course. But the truth is, the mischief has been already done; once there is a severe inflammation or fever upon a patient, it is impossible for her to take another cold until the previous one has been cured.

This fact, then, indicates clearly what the proper treatment of such cases should be; we must treat them on the same general principles of all other inflammations; and as soon as the fever and inflammation are sufficiently removed by means of ablutions, wet compresses, injections,

water-drinking, and, if necessary, the packing wet-sheet, the discharge—if any such be at all necessary—must follow as inevitably as a stone falls to the ground. Thus it is, then, that under certain circumstances, a cold may give fever and inflammation; while under other circumstances, cold cures these symptoms. These operations of nature, simple and beautiful as they are, must prove highly interesting to every reflecting mind; and they show, moreover, the goodness, benevolence, and design of the Creator, in furnishing us everywhere, so abundantly, a remedy so powerful and safe as pure, cold water.

In all those diseases following delivery, the excellent Dr. Good observes, "That cleanliness and purity of air are of the utmost importance," and "that, without these, no plan whatever can succeed; and with them, no other plan is often wanted." "They are, moreover," he continues, "of as much moment to the infant as to the mother. It is a striking fact that, in the space of four years, ending in 1784, there died in the lying-in-hospital of Dublin—at that time a badly-ventilated house—2944 children out of 7650; though after the ventilation was improved, the deaths within a like period, and from a like number, amounted to not more than 279.

LETTER XXXIV.

OF CHILDBED FEVER.

Milk Fever as distinguished from Puerperal Fever—The great Danger of Childbed Fever—Its Symptoms and Nature—Modes of Treatment—Is it a Contagious Disease?

In the course of two or three days usually after the birth of the child, the woman experiences more or less febrile excitement of the system. This is what is termed *milk* fever, it being connected with the coming on of the lacteal secretion. The attack sometimes amounts to a "smart febrile fit, preceded by shivering, and going off with a perspiration." It is not dangerous, seldom lasts over twenty-four hours, and during the time of its appearance the breasts are full, hard, and painful, which distinguishes this from more dangerous fevers.

Puerperal or childbed fever is a very different thing from the foregoing, and is reckoned by physicians as being one of the most fearful of maladies.

According to the celebrated Dr. Blundell, "women after their delivery in general do pretty well, although no attentions are paid to them;" and it is the testimony of the same distinguished author, that "when the constitution is good, and the circumstances are not extraordinary, the less they are interfered with the better;" and yet it must be admitted by every candid and reflecting mind, that, do

what we may in all the known possible ways of fortifying and invigorating the general health, woman must ever in childbirth be subject to some of the most fearful diseases and accidents to which the human frame is liable. Suppose it be only one in fifty, one hundred, or one thousand, that is to be attacked under such circumstances with a threatening and most dangerous malady, who is there that wishes his wife, sister, or friend to be that one—and that one, too, to be subjected to the treatment of an ignorant or unprincipled quack, whether of the male or female stamp? It is for the cases of exception, then, and not the rule, that physicians should toil long and hard in their efforts to remedy the ills to which human nature now is and ever must be subject.

I am led to these remarks, partly from the necessity of the case, but more from the fact, that there are those in modern times who, through ignorance, as we must charitably conclude, would mislead the public on this most important subject. I will go as far as any one in encouraging woman to pursue a rational course in the preparation for, and the consummation of, childbirth. Those who have read my humble efforts at authorship on this subject hitherto, must, I am confident, be aware of this. At the same time, while I would encourage woman—encourage her even more than any of us have yet done—I would have her to understand that there are dangers, fearful and imminent dangers, always attending the parturient state. Be these dangers only *one* in a hundred or thousand cases, they are yet dangers; and who among us, even of the most experienced, can tell who is to be the subject of them, and who is not? It behooves to be ever watchful in these important matters of the healing art.

I propose, then, here to speak of that most formidable, most fearful of all diseases to which the puerperal condition is liable, the puerperal fever—the puerperal *plague*, as it has been called—so sudden in its attack, so rapid in its progress, and so fatal in its effects—fatal, that is, according to the old methods of treatment—sanctioned, as they are, by the usage of ages.

Time of Occurrence.—The puerperal or childbed fever comes on usually within the fourth day, reckoning that of delivery the first. It happens oftenest the second or third day. It may come on the first day, or it may, though rarely, attack the patient eight, ten, or more days after delivery. The later the day, the less the danger, as a general fact.

Symptoms.—Childbed fever is more commonly ushered in by a chill, which is not, however, long in duration. This is experienced most along the back, and sometimes about the shoulders and neck. The chill varies in degree of intensity in different cases; with some patients there is a degree of chattering, such as occurs in a severe ague fit; with others there is very little of the symptom; and in some cases no chill whatever is experienced. These last, however, must be the exception to the rule. In almost every conceivable case, a degree of chilliness, greater or less, is experienced. As in other inflammations, this chill is followed by fever. The intensity of the chill is considered no measure of the vehemence of the subsequent fever; the most terrific fever may follow very mild chills, and the contrary. Some regard that there is most danger to be apprehended when the chills are of a mild character.

Here I ought to remark, that patients should not be frightened at every little chill they may experience. The

coming on of the milk—the milk fever, as it is called—heat in the breast, and a variety of circumstances other than those of childbed fever, may be preceded by or attended with chills. Indeed, almost every mother with a new-born child experiences more or less of chilly symptoms; and yet fortunately but few are attacked with that terrible malady of which we are treating. So much by way of encouragement in regard to the matter of chills.

In connection with the rigors before mentioned, the patient complains of pains in the abdomen; these may be so slight as to be scarcely perceptible to pressure on the part, or they may be so violent and severe that the gentlest touch of the finger is regarded with apprehension, and the weight of the bed-clothes proves a burden that cannot be borne. "Sometimes the pain," says Professor Meigs, "which is, at the onset of puerperal fever, felt in the hypogastric region, is too intense to be borne by any human patience; and no exhortation or recommendation can prevent the woman from crying out aloud, or even screaming with her agony. All over the abdomen these pains may be felt, above, below, to the right, to the left, in the region of the diaphragm, and in the lumbar region; this diffusion, however, is neither constant nor frequent, and it is found, especially in the less malignant varieties of the disease, that it is in the region of the navel, and more especially below it, that the patient complains." Severe after-pains may be experienced in connection with the disease, or the reverse. Little or no fever may occur in connection with severe pain, and so the contrary. If the pain is circumscribed, as we say—confined mostly to one spot—it is far more favorable; but if the pain and tenderness are spread over a large surface, beware, lest

there be mischief at hand. If the pain be even slight, and yet diffused extensively over the surface of the abdomen, we must take heed lest we get into trouble that will imminently endanger the patient's life.

The pulse always rises high in childbed fever. This is one of the most distinctive features of the disease. It is seldom lower than 115 or 120 per minute, except when it is giving way before the power of remedial means. More commonly it rises to from 130 to 140 beats per minute, and it has been known to rise as high as 160 or 170. These last, however, are extreme cases—exceptions to the general rule.

Besides the symptoms enumerated, there sometimes occurs headache, sometimes vomiting, and at others purging, which last symptom is probably in general a good omen.

Duration of the Disease.—Puerperal fever, like most other diseases, is not very uniform in its duration. It is, however, in general short. It may last for a number of days—for many days, if we reckon the convalescence a part of the disease. On the other hand, it may, like the plague itself, carry the patient off within the first twenty-four hours of the attack. Three or four days is reckoned to be the average duration of childbed fever, when it occurs in the epidemic form.

Professor Meigs has well explained why it is that childbed or peritoneal fever is so serious and dangerous a malady as it is. He observes:

"The peritoneum (the lining membrane of the abdomen), a serous membrane, known for ages as one of the tissues most ready to take on inflammation, undergoes in labor, and during lying-in, changes of the greatest importance. Its great extent may be known by computing the

superficial contents of that portion of the serous membrane which invests the alimentary canal. This canal is about forty feet in length, and its outer coat is composed of peritoneum. If cut up by the enterotome, it would be at least four inches wide and forty feet long, affording a superficies of more than thirteen feet, to which should be added the superficial contents of the remainder of the membrane, where it invests the liver, the epiploon, the mesentery and mesocolon, besides the ligamenta lata, and all the other parts which derive from it their serous covering. This vast surface inflames rapidly and totally, and passes through the stage of inflammation with extraordinary speed. It cannot happen that it shall ever be extensively inflamed without a coincident exhibition of the greatest disorder in the functions of the nervous organs directly implicated in its structure, or possessing with it physiological relations that could not be safely disturbed. The peritoneum is the investiture of the abdominal organs; the peritoneal coat of the stomach is as truly a part of the organ as its muscular or mucous coat; the same is true as to the peritoneum that invests the liver, that of the spleen, and the same truth is of the utmost import when it is stated with regard to the peritoneal coat of the whole alimentary apparatus. It is clear that extensive or universal inflammation of the peritoneal membrane is inflammation of all or many of the organs contained within the cavity of the abdomen. A great puerperal peritonitis, therefore, may be properly regarded as a complex inflammation of a vast number of organs indispensable to existence. Why should we be astonished, then, to see the power of the nervous mass sink under the invasion of causes of destruction so great and so pervading?

"Seeing that the superficies of the peritoneum is equal, probably, to thirteen or fourteen feet, we should have abundant reason to dread so extensive an inflammation from the constitutional irritation which it alone would produce; but when, in addition to that consideration, we take into view the great affusions which may ensue, the suppurations, the interruption of the intestinal functions, the depravation of the actions of the liver, etc., which are occasioned by it, we have still greater reason to deprecate its attack, and to seek for the justest views of its nature, and of the remedies most appropriate for its cure."

Professor Meigs elsewhere judiciously remarks, that, considering the changes that take place in the reproductive tissues at childbirth, "there is, in fact, greater reason for surprise, when we find it not followed by inflammation, than when we meet with the most violent and destructive cases of that affection."

Treatment.—In the year 1846, I treated (in connection with a missionary friend and physician, who is now in Siam) a premature case of childbirth, which, to say the least, threatened to become one of severe puerperal fever. The case was an important one, and as such I here present it to the reader. It was written out with great care and accuracy at the time by the medical friend referred to. I give it in his own words:

"*March* 19, 1846.—Desirous of availing myself of an opportunity which Dr. Shew kindly afforded me of witnessing the hydropathic treatment of cases of labor, I accompanied him to No. — Second Street, where he had been summoned a few minutes before, to attend Mrs. S., who was then in need of his services.

"We found the patient an intelligent woman, of the

nervous temperament, with her constitution much broken down—though she was but thirty-one years of age—by the results of severe previous labors, the last a miscarriage. After some of her former confinements, she had been weeks and months in recovering. In one case, when she was treated for puerperal fever, her husband paid in one year not less than one hundred and fifty dollars—no trifling sum out of the earnings of a working man with a large family—to the apothecary alone, for leeches and medicines. The patient had always been in the habit of using strong tea and coffee; drank the *mineral* water of the city wells; for some months had relished nothing but the little delicacies sent in by her friends, and throughout the winter had been able to do little or nothing at home.

"In consequence of excessive fatigue, a few days before, in 'house-hunting,' as she called it, she had been seized on Tuesday, the 17th, at 10 A. M., at the close of the fifth month of her pregnancy, with the pains of labor—her former miscarriage having, of course, induced a predisposition to another. These pains increased in frequency and severity till they caused the greatest suffering, and prevented all sleep on Wednesday night and Thursday, up to the hour (3 P. M.) when she sent for Dr. Shew."

Here, then, was a patient, whose previous history, impaired constitution, loss of sleep, and exhaustion from intense and almost incessant suffering, protracted now for more than two days, seemed to promise any thing but a *speedy* recovery, even should delivery be safely effected. It should be added that, *up to the time*, she was an *utter stranger* even to the hydropathic treatment.

"Her bowels having been moved the day before, all that was deemed necessary was to render the condition of the

patient more comfortable, by resorting to sedative frictions along the spine with a towel wrung out of cold water, and to the tepid hip-bath, with sponging and rubbing the whole surface of the body. After this, less complaint was made, till soon after 6 P. M., when there was a sudden aggravation of the bearing-down pains, resulting in the delivery of a well-formed but still-born male child, of apparently five months.

"In about fifteen minutes the after-birth was detached, and taken away. Not even the usual amount of hemorrhage occurred. A bandage was applied to the abdomen, as the patient expressed a wish for it; and after resting awhile, a little panada was given her as nourishment.

"Mrs. S. continued very comfortable through the evening; no excess of the natural discharge; complained only of exhaustion, and slight difficulty of passing urine. As there was some heat of the surface—the pulse being from 90 to 100—tepid sponging was resorted to, which proved very grateful to the patient.

"*Second Day* (*Friday*), *Seven, A.M.*—Found the patient had obtained considerable sleep at intervals during the night; felt very comfortable, though occasionally had slight pains in the abdomen; tongue moist; pulse 81; had passed a little water during the night, but with difficulty; had a strong desire for a cup of coffee, but persuaded her to take a little panada in its place; had not much appetite; was permitted to sit up for a few minutes while her bed was made.

"*Half-past Eleven, A.M.*—Mrs. S. still very comfortable; found her sitting up in the rocking-chair, the very picture of convalescence. Sponging enjoined, if any feverishness should arise.

"*Three, P. M.*—Dr. S. sent for, as the patient had been

seized a few minutes before, rather suddenly, with a sharp pain in the left side. Had been drinking a tumbler of cold lemonade. Had a natural movement of the bowels that morning, and passed a little water. The tepid sponging of the surface had been neglected. Pain fixed, severe, pretty constant, remitting only for a moment or so. No corresponding contractions of the uterine tumor observed. Some pain also complained of in the hip, with which she had, on a former occasion, been troubled. Up to that time had had no chill. Warm fomentations were applied, but with little relief.

"*Half-past Four, P. M.*—A chilliness felt, then shivering, prolonged, with increase of the fixed pain of the side; pulse 112, weak; patient restless, anxious, desponding; knitting of the brows, involuntary weeping. A bottle of warm water was applied to the feet, and soon after, the chills ceased.

"A large warm enema was now administered; this brought away considerable fecal matter; and fomentations were applied to the abdomen. Next, the patient was seated in the hip-bath, at a temperature of 95°, for fifteen minutes, when water was passed more freely than before, and a slight nausea experienced. The result of this was complete abatement, for the time, of the pain in the uterine region, the diminution of the frequency of the pulse to 90, and great comfort. The bandage to the abdomen having been removed, to allow of the bath, was not replaced. If need be, fomentations to be kept up.

"At 7 P. M. found the patient in a profuse perspiration; pain in the abdomen had lost its acuteness; *soreness* there was all now complained of—soreness in the head, 'in the bones, and all over.' Abdomen swollen, and tender on

pressure; breathing shallow; pulse 110–12; discharge from the womb (the lochial discharge) arrested. Patient is to be kept quiet; to take no nourishment; no fire to be in the room.

"At 9½ P. M., the perspiration still continues; complains of pain in the hip, but chiefly in the left side, as before, and shooting across the abdomen; pain now very severe, increased by coughing; breathing thoracic (shallow), and 28 in the minute; pulse 98; is thirsty; tongue moistish, with a slight milky coat. Fomentations as usual.

"*Half-past Ten, P.M.*—Pain increasing in the abdomen and hip; tenderness increasing; can scarce bear slight pressure on the abdomen; knees drawn up; restless, discouraged; pulse 100, though not very full or strong; skin still slightly moist.

"In this critical state of things, when nearly every symptom of that fearful disease, puerperal fever, was invading the system, and when, according to the prescribed rules of practice, the most vigorous antiphlogistic measures would be called for, a plan of treatment was adopted that was, as it seemed to me, far more likely to *kill* than to *cure*, and which I could not but protest against at the time, but which, as the result proved, was eminently calculated to turn back the tide of disease so rapidly setting in. It certainly afforded striking evidence of the resources of hydropathy, and its promptness and efficiency in relieving pain, and extinguishing inflammation.

"Mrs. S. was carefully lifted from her bed, and after being placed in her chair, was transferred to a hip-bath, containing about one pail of water fresh from the Croton hydrant near by, of the temperature of 42° Fah. A towel, wrung out of cold water, was applied to the forehead at the

same time. Of course she was well covered with blankets. She had been seated there but a few minutes, when she expressed herself as feeling *very comfortable indeed.* The severe pain in her abdomen and thigh *had left her as if by magic*, and so complete was the relief, that she fell into a gentle doze, from which, awakened by nodding, she observed, 'There, I feel so easy now, I lost myself, I believe.'

"While in the bath, her pulse was lowered several beats in the minute; the unimmersed parts of the body remained warm; the hips were to her of a refreshing coolness. After remaining thus seated in the water about twenty-five minutes—a slight addition of more cold water, by gradual pouring, having been made during this time—she was lifted back to the bed. Her pain had now entirely vanished; the natural lochial discharge was soon restored; the pulse reduced to 94; and, warm and comfortable, she had a prospect of a good night's rest.

"*Third Day* (*Saturday*), *Seven A. M.*—Found patient looking comfortable and happy. No pain now in the abdomen, slight soreness only; tympanitis (swelling) gone; tongue moist, and hardly coated; pulse 79; had had no sensation of chilliness after her bath, but slept from 12½ to 4 A. M., without waking, and another doze after that; window had been a little raised all night, and no fire in the room, though it was cool. Now was able to pass water without difficulty. Was directed to take for breakfast some coarse wheaten bread, toasted, and softened with milk, and a little scraped apple, if she wished.

"*Eleven, A. M.*—Mrs. S. appears very comfortable. With the aid of a friend has been up and changed her clothing. Pulse 84; complains of no pain of any consequence in the abdomen.

"*Half-past One, P. M.*—Had been under the necessity of getting up without assistance, and fatigued herself, and thus induced a return of very severe pain in the uterine region. Dr. S. was sent for, when resort was had again to the hip-bath, filled with cold water from the hydrant, which had with such wonderful promptitude averted the danger of puerperal fever, with which she was threatened on the evening of the second day; as on that occasion, in less than five minutes, the pain and feverishness was completely quelled. She was allowed to remain in the bath half an hour, and requested to abstain from food till evening.

"*Five, P. M.*—Patient doing remarkably well; cheerful; free from pains in the abdomen, save now and then a very slight one; some soreness on pressure; pulse 84, compressible.

"*Ten, P. M.*—Had slept during evening; had taken a little nourishment. Has some difficulty in passing water, and as occasional slight pains and soreness still continues in the abdomen, the cold hip-bath, at 42° Fah., was again resorted to for about thirty minutes. During this time the pulse was lowered from 80 beats in a minute to 70; water was passed freely, and pains put to flight.

"After the bath, the patient continuing warm and comfortable, was directed, should there be any return of pains during the night, to seat herself in the hip-bath, which was left in the room.

"*Fourth Day (Sunday), Half-past Seven, A. M.*—Patient had slept most of the night; looks bright; feels 'very comfortable;' pulse 72, soft and natural; had raised herself in bed without difficulty, and washed. On account of some difficulty in passing water, the hip-bath was used for about

fifteen minutes, when the urine flowed more copiously and freely than at any previous time. Left seated in the rocking-chair; sitting up occasionally; she says it has rested and refreshed her from the first.

"Appetite good; thinks even the plainest food would be relished. Breakfast to be as before; the toasted coarse bread, soaked in milk, with a little scraped apple. Directed to take no nourishment at any time, unless a decided appetite, nor then oftener than three times in a day. Is to take an enama and another hip-bath in the course of the morning.

"*Six, P. M.*—Had continued to gain during the day till toward evening. It most unfortunately happened that an intoxicated man, mistaking the house, strayed into the room where she was lying, with no attendant but a young girl; seating himself, without any ceremony, in the rocking-chair, with a lighted cigar in his mouth, he smoked away to his satisfaction, and then very deliberately composed himself for a nap. This strange visitor, and the fumes of the tobacco, had given poor Mrs. S. a severe headache, the first with which she had been troubled; considerable nausea, with paleness of the face, cold feet, etc. A towel wet with cold water was applied to the head, and a hip-bath ordered.

"*Half-past Nine, P. M.*—Was rapidly recovering from the effects of the afternoon's unexpected visit; sat up awhile.

"*Fifth Day* (*Monday*).—At 7½ A. M., found Mrs. S. sitting up in bed sewing; pulse 75; had rested well; has a good appetite. Breakfast to be as before; may safely take a hip-bath at any time when suffering from pains and is not made very chilly by sitting in it.

"Was able this morning to rise and walk about the room unsupported. Required no assistance in getting to the bath; bowels moved naturally; sat up several hours to-day; appears bright, pleasant, and cheerful.

"*Sixth Day* (*Tuesday*).—Mrs. S. feels to-day as much better than she did yesterday, as she did yesterday better than the day before. Sat up, and was about the room nearly all day; continues the practice of daily sponging the whole surface, and the use of the hip-bath. At night, retention having ensued from over-distention of the bladder, in consequence of an untimely and protracted visit from some of patient's friends, Dr. S. was sent for, and deemed it advisable to resort to the catheter, which she had frequently been compelled to use on former occasions, sometimes for months together.

"*Seventh Day* (*Wednesday*).—Mrs. S. appeared to be better in the morning; able to rise without assistance, to walk about, and even to sweep the room; catheter again required.

"*Eighth Day* (*Thursday*).—During the night, of her own accord, took two or three or four cool hip-baths, and found them refreshing, and of service in promoting easy evacuation of the bladder. At one time dropped asleep, and remained so an hour or more—sitting in the water. Pulse in the morning. Dressed the children and arranged the room herself to-day; and though a week had hardly elapsed since her confinement, felt *strong enough in the morning to go down stairs*, and to do a half day's work in sewing, etc., from which she appeared to experience no injury. A few days after she ventured to ride down to the lower part of the city, and having since continued to improve, save an occasional return of an old difficulty—retention—is most

gratefully sensible, under Heaven, to her physician and hydropathy, for a far more speedy and pleasant convalescence than she ever experienced after any of her former confinements."

Professor Gilman, of this city (New York), in his edition of the Dublin Practice of Midwifery, gives us the following account of a method of treatment which was adopted with remarkable success in the old country:

"In an epidemic (puerperal fever), which raged at Keil in 1834, '35, and '36," says Professor G., "Michælis used ice, both externally and internally, with excellent effect. The cases in which he gave it with success were marked by burning pain and heat in the bowels, thirst, painful eructations, and tenderness of the epigastrium. The brain was clear; no delirium. The ice was given by the mouth, in bits the size of the finger, every half hour or oftener; it was also applied over the abdomen in a large bullock's bladder, extending from the epigastrium to the pelvis, in a layer half an inch thick. This application was in some cases continued for three days, the bladder being changed as soon as the ice melted. It was very grateful to the patient, and Michælis thought it had cured some cases where affusion had actually taken place into the peritoneal cavity. The use of ice was not persisted in unless it was grateful to the patient. The symptoms of amendment were a sudden and very great fall in the frequency of the pulse, a peaceful sleep, relief from the painful eructations, and diminished distention of the bowels. A profuse watery diarrhea occurring with these favorable changes, seemed to him to be critical."

This treatment of Michælis is certainly a very bold one. Those who are well acquainted with the water-treatment

will be able at once to comprehend the fact, that the applications mentioned were sufficient to cause "a sudden and very great fall in the frequency of the pulse, a peaceful sleep, relief from the painful eructations, and diminished distention of the bowels." Nor is it incredible that a cure might thus take place, even in some cases where affusion into the peritoneal cavity had actually taken place, since the effort of nature tends always, so long as life lasts, necessarily to that end. It is well worthy of remark, that the treatment of Michælis was persisted in only so long as it was grateful to the patient. This is an important rule to remember.

Nor do I regard it necessary, absolutely, to use ice in the treatment of this or any other inflammatory affection. Water—even at the temperature of rivers at this latitude in the summer—which is usually, I believe, at about 70° Fah., may be made very effectual in the cure of inflammatory diseases. Thus, if we wrap one or more wet sheets about a patient, having him, at the same time, on a cool straw bed, and neither the bed or wet sheets having any covering whatever, we, through the natural processes of evaporation and refrigeration, abstract in a short time a great amount of animal heat. We may likewise change these applications as often as we desire, or pour water upon the sheets frequently, and thus cool the patient to any desirable extent, without the use of ice or water that is extremely cold. It should be understood, also, that general applications—applications over the whole or a large part of the body's surface—are far more effectual in reducing the inflammation of a local part, than applications locally made can be. This fact is not generally understood.

Is Childbed Fever a Contagion?—This disease is believed by many to be at times contagious. It would, doubtless, be a difficult undertaking to prove positively that such is the fact. It is the opinion of some able writers on medicine, "that there is unquestionably an epidemic influence, or atmospheric constitution, which sometimes, in extensive districts of country, in villages, in towns, and cities, and especially in crowded lying-in hospitals, determines, by an unknown force, the attack of childbed fever, and so modifies the pathognomonic conditions as to hurry numerous victims to the grave, and this, notwithstanding the most reasonable methods of cure."

But that the disease is really communicable from one patient to another, is not so palpable. One author—Professor Meigs—a man whose good character and long experience entitle his opinions to much weight, tells us that a great experience—and few have enjoyed greater—has not enabled him to perceive that he has been the means of disseminating this malady among lying-in women, to whom he had given professional aid while attending upon dangerous and fatal attacks of it, or after making or witnessing autopsic examinations of the bodies of the dead. On the other hand, Dr. Gooch, an author whose opinions are probably equally deserving of respect, tells us in reference to puerperal fever, that it is not uncommon for the greater number of cases to occur in the practice of one man, while the practitioners of the neighborhood, who are not more skillful or busy, meet with few or none. A practitioner opened the body of a woman who had died of puerperal fever, and continued to wear the same clothes. A lady whom he delivered a few days afterward was attacked with, and died of a similar disease; two more of his lying-

in patients, in rapid succession, met with the same fate. Struck by the thought that he might have carried the contagion in his clothes, he instantly changed them, and met with no more cases of the kind.

A woman in the country, who was employed as washer-woman and nurse, washed the linen of one who had died of puerperal fever; the next lying-in patient she nursed died of the same disease; a third nursed by her met with the same fate, till the neighborhood, getting afraid of her, ceased to employ her. The disease has been known, according to Dr. Gooch, to occur in some wards of a hospital, while the others were at the same time free from it. Dr. Blundell, who is certainly very high authority, while he admits that this fever may occur spontaneously, and that its infectious nature may be plausibly disputed, affirms, that in his own family he had rather that those he esteemed the most should be delivered, unaided, in a stable —by the manger side—than that they should receive the best help in the fairest apartment, but exposed to the vapors of this pitiless disease. Gossiping friends, wet-nurses, monthly nurses, the practitioner himself—these are the channels by which, in Dr. Blundell's estimation, the infection is principally conveyed.

Some authors contend, also, that it is only through the influence of the imagination, or by sympathy, that puerperal fever becomes more prevalent by times than ordinarily; and there can be but little doubt that these causes operate to a greater or less extent in communicating the malady. If a weak and nervous patient fears it, and especially if it is prevailing epidemically in the neighborhood in which she resides, she is much more liable to an attack than if she had no thoughts whatever of the disease.

It is, moreover, under such circumstances more likely to prove fatal than when it occurs sporadically.

Fortunately, however, the question of contagion does not at all affect the treatment of this terrible malady. All agree that it is an inflammatory disease which demands, under all circumstances, at our hands, an antiphlogistic or anti-inflammatory treatment. There can be no two opinions on this point; and it is a circumstance worthy of the most particular remark, that we have in water-treatment the most abundant of therapeutic resources by which to combat inflammation of whatever name or grade—resources more potent and effective, a hundred fold, than any other ever known to man.

LETTER XXXV.

OF SORE NIPPLES.

This Complaint is a very common one—Its Causes—Methods of Prevention and Cure.

Excoriated or sore nipples are very common, as every one acquainted with matters of childbirth knows. "You can have at present," says Professor Meigs to his class of young men, "no idea of the vexations that women endure in nursing their children in the month, from sore nipples: a complaint so common, that I am always surprised when I hear one of my patients say she does not suffer from it." "The nurses and doctors," says Dr. Gooch, "have a long list of remedies for this complaint; but it is in general obstinate, and the remedies are ineffectual; in attempting to cure it, you are rowing against the stream; as long as the cause, namely, the action of the child's mouth in sucking, is renewed at short intervals, local applications are of little use."

What, when, are we to do with sore nipples? an affection apparently so trifling, and yet one which causes an amount of suffering that can be adequately appreciated only by those who are brought to endure it? Are we to suppose that it is the order of nature that women should thus suffer in that most important matter, the rearing of their young? Do we find any analogy in nature by which

we are led to such a conclusion? It is very plain, I think, that we do not. All mammiferous animals, when left to themselves, nourish their young without disease or pain. Thus, too, would it be with the human species, did we, as the animals, live in accordance with the natural laws.

Let us look, then, for the causes here concerned.

1. *The general Condition of the System.*—In consequence of the ill-governed habits of the generality of females, both in pregnancy as well as at other times, a great amount of morbid matter is formed in the system. Too much food is eaten generally, and of improper kinds. The blood, fluids, and secretions of the system generally are in an impure state. Thus it is, that when a small wound or abrasion is made, the part does not readily heal. A drunkard's system often becomes so impure that he festers and dies of a mere pin-scratch. Thus we see that the condition of the living body may be modified at pleasure to an almost indefinite extent. Women, particularly, who are, or who ever expect to be pregnant, cannot be too particular—cannot take too much pains, in order to preserve a pure and healthy state of the general system. Depend upon it, this will tell when they come to that ever-important period of nursing the new-born babe.

2. *Cleanliness.*—Many, no doubt, get sore nipples, in great part, because of their want of attention to cleanliness. Wash the nipples often, and keep them at all times most scrupulously clean, if you wish to prevent them becoming diseased. Nowhere is it more necessary that this ever-important duty should be strictly observed.

3. *The Dress.*—It is said that the Greek women were in the habit of supporting their bosoms by a certain contrivance called *strophium*, and the Roman women by one

called *fascicola*, which were not at all liable to compress or countersink the nipple, as carpenters would say. The breast should always be left free to grow in all its parts; and if there had never been any corsets, busks, or tight dresses among us, we should not meet that troublesome affection, the countersink of the nipple. If young ladies could know how great an amount of suffering they are rendering themselves liable to, when they compress their bodies in this way, they would, I am sure, one and all, avoid that which can do them no good at the time, and must end in inevitable harm. Sad is it to think of, that they have never been taught on the subject; their mothers are not acquainted with it, nor are there any popular works treating of these matters from which they can gain the information which would prove of such signal benefit to them. It is, then, with feelings of earnest regard for the condition of the sex, that I prepare this work for those who stand in so much need of that information which it attempts to put forth.

With the view of drawing out the nipple more effectually, it is sometimes asked of the physician, whether it is not advisable to have the breasts drawn by a young puppy, or by a friend, before the birth takes place? An objection to this practice is, that in consequence of the sympathy that exists between the breasts and the womb, exciting the former before the time of the full period of pregnancy might, or, rather, would cause pains in the latter before the proper time; in other words, premature labor would be likely to result. Besides, it is the order of nature that drawing the breast be practiced only after the birth has been accomplished. Nothing whatever can be gained by drawing the breast before delivery.

Sore nipple may arise from a variety of causes. The breast sometimes becomes so inflamed, so hard, so obstinate—all, perhaps, in spite of the best that we can do—that it is found impossible to extract any milk whatever from the lactiferous tubes. Under such circumstances the frequent sucking of the nipple by the child, or, what is worse, by the use of the miserable instruments which have been contrived for drawing the breast, it is often made very sore. At other times, too, the patient's system appears to be in a state highly calculated to favor cracking or chapping of the surface, such as we observe in many persons, who, when they commence bathing, find their hands and feet becoming very sore. These are always evidences of impurity in the body, and the proof of this fact is found in the circumstance, that if they set resolutely at work to renovate their health by the hydropathic treatment, they become cured of the symptoms, just in proportion as they become firmer and more vigorous in general health.

We need not expect to remedy sore nipples to any great extent so long as the breast remains inflamed. We must first cure the breast, and then with reasonable care and attention the nipple will soon heal of itself. But if the general system is at fault, the blood impure, and the skin at any moment, on the application of a little moisture, liable to crack, then our object should be to employ such a course of constitutional treatment as is calculated to improve the system generally. Sore nipple often consists "in a long, narrow ulcer, wide as a horse-hair, and a sixteenth of an inch long; this ulcer is so small, that it requires a good light to see it; and even then it often cannot be detected, except by bending the nipple over to the opposite side,

which discloses it." This ulcer is often so exceedingly painful, that the mother is unwilling to nurse the child as often as it should be done; thus exposing her to the evils of an over-distended and inflamed breast; and we may judge something of the anguish which the poor patient endures, when we see the tears streaming from her eyes every time the child attempts to nurse. We see, too, how difficult it must be, in many cases, to cure this kind of sore nipple, since every time the child takes it into its mouth it holds and stretches the part, thus causing the crack to become larger and worse.

A great variety of the so-called remedial substances have been tried for the cure of this affection. I would not say that none of the ointments, washes, powders, etc., which have been thus employed have any good effect. But one thing I am confident of, which is, that the water-dressing, that is, fine linen compresses or lint, wet in the purest and softest water, and often changed, to prevent their becoming too warm, in connection with appropriate constitutional treatment, will be found the best that can be resorted to.

Some have recommended very highly the use of nitrate of silver in curing sore nipple. Sometimes, perhaps often, it seems to work well, but by high authority in the profession it is affirmed that in many cases the disease is only made worse; nor has any rule been ascertained by which it can be determined beforehand as to whether harm or good will be the result in any given case.

Professor Meigs regards it as a matter of great consequence, in the application of nitrate of silver, to touch only the granulations, and not the skin itself. His method is, to take a fine camel's-hair pencil, and dipping it in a solution of the nitrate, to carefully pencil the granulations only.

The edge of a large feather, or the feather end of a goose quill, could very well be made to answer the same purpose. It is certain that this application will in many cases give relief, more or less, to sore nipples, as it does to sore lips and other parts; but, as before remarked, it sometimes makes them worse, and we have as yet no rule by which to determine beforehand as to what cases it will be applicable, and what cases not. Those who choose can experiment for themselves. I myself prefer the water-dressings; yet there is no good reason why the two may not be combined, if that is thought best. A solution of twenty grains of the nitrate to an ounce of pure water, is a good proportion in which to use it.

I have already spoken of cleanliness as a prophylactic means in the management of the nipples; and I would here again urge upon the attention of all who are interested in the subject, the exceeding great importance of this observance. Never should a child be nursed without the mother at once, on its leaving off, taking a sponge or soft linen cloth, and making the part perfectly clean, and afterward dry. This may appear a matter of small importance to some, but it is the attention to these small matters that go to make up the great sum of health. Professor Meigs, who admits the great frequency of sore nipples in his own practice, tells us of the method of one of the Philadelphia nurses, Mrs. De Groot, "a most sensible woman, in whose prudence and knowledge of her business he could confide," and who informed him that the nipple rarely becomes sore under her management, which is as follows: "As soon as the child has left the nipple, Mrs. De Groot cleanses it with a bit of moistened linen. She dries it perfectly, and then, taking the mamilla (nipple) between the thumb and

two fingers, she gently compresses it, with a view to assist it in disengorging its capillary vessels, that are rendered turgid by the suction. As soon as she has rendered it soft and flexible again, she covers it thick with fine arrow-root powder, and keeps it in that way perfectly dry. I do not remember," continues the Professor, "that the ladies she has nursed for me have, any of them, suffered from this annoying disorder."

Almost any dry substance, of an inert or harmless nature, such as Indian meal, or rye, or wheat flour, would answer as well as the flour of arrow-root to dry the nipple. I mention this fact for the reason that in many parts of the country arrow-root is not easy to be obtained.

The cracks or gaping ulcers of the nipples may be often helped very materially by acting upon a well-known principle of surgery. Wherever in the living body there is a gaping wound, the healing process is found to be facilitated by retaining the parts in close connection. Thus in a common cut or wound, when the edges are separated, we apply stitches or adhesive plaster to bring the parts into closer union, so that in the granulating or reparative process, nature has much less to accomplish. The greater the space to be filled by a new growth, the longer the time required, and the contrary. On this principle, then, of bringing the parts into closer union, thus giving nature a less amount of work to perform, a cracked nipple may often be benefited very much. A delicate strip, or better, if we can manage it, delicate *strips* of plaster may be applied in such a way as to shorten the reparative process a good deal. Besides, too, the sore part is thus shielded from the action of milk or other deleterious substances that might otherwise come in contact with it. But the

plaster has in it no healing property whatever; nothing at all in its nature which can aid the granulations. It only acts as a mechanical agent in keeping the parts in a more favorable condition for healing. The ulcer should be made as clean as possible before any such measure is resorted to.

I should mention particularly, before closing this subject, that bathing the breasts and nipples daily and often, in cool or cold water, before confinement, has a most salutary effect in hardening the parts, and rendering them less liable to inflammation and soreness of whatever kind. So too, indeed, we say of general bathing, and all habits which tend to the improvement of the general health. Always, the better the condition of the general system, the less liable to disease its local parts.

LETTER XXXVI.

INFLAMMATION OF THE BREAST.

Structure of the Mammary Gland—Nature and Causes of Inflamed Breast—Means of Prevention and Cure.

It is very common in midwifery-practice to encounter swelling and inflammation of the breast, more commonly within a few days of delivery. In the majority of cases, this inflammation is managed without much difficulty; but in some cases it would appear that the part must suppurate, or break, as we say, forming what we call the mammary or milk abscess. This is one of the most troublesome things women are ever brought to endure; but however much pain and discomfort milk-abscess may cause the patient, it never kills; and yet the patient may be kept for months in the sick room, suffering from the affection more than tongue can tell.

Inflammation of the breast may come on at any time during lactation. It is more common, however, in the earlier than the later parts of the period. The nursing mother cannot, however, at any time be too careful in all matters pertaining to health, since a little imprudence is sufficient, in many cases, to induce this affection. In multitudes of instances it has been brought on by some apparently trifling carelessness, when, with a little forethought and self-denial, perhaps, months of pain, suffering, and discouragement might have been avoided.

In order to understand the management of the female breast during lactation, it is necessary that we should know what it is, its anatomical structure, and its physiological functions.

In structure, the breast is a conglomerate gland, and consists of lobes which are held together by a dense and firm cellular tissue; the lobes are composed of lobules, and the lobules of minute cæcal vesicles, the ultimate terminations of the excretory ducts.

Near the center of each breast there is a small projection of the tegumentary coverings, constituting what is called the nipple; this is surrounded by an areola or border, having a colored tint.

Before conception, this areola is of a pink color; after conception it assumes a brownish hue, which deepens in color as pregnancy advances. This brownish tint continues through life.

About the nipple there are a considerable number of sebaceous follicles, which secrete a peculiar fatty or oily substance for the protection of the delicate skin about the part. During the period of nursing, these follicles become increased in size, having the appearance of pimples projecting from the skin. The sebaceous or fatty secretion from these follicles serve, during lactation, to shield the delicate part from the action of the saliva of the child's mouth.

The milk-tubes, or excretory ducts, as they are anatomically named, are usually ten to fifteen in number; and as many as twenty-one is said to have been found in a single breast. These tubes commence by small openings at the apex of the nipple, and passed inward parallel with each other toward the central part of the breast, at which place they

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become enlarged, and branch off in every direction throughout the mammary gland; these communicate in some way with the blood-vessels of the part, and, by a peculiar and wonderful provision of nature, the milk is formed from the blood within them. Among and about the milk-tubes, there are many adipose cells, more or less numerous, and more or less filled in different cases, giving to the part its peculiar rotundity and softness.

The milk-tubes are capable of supplying a quantity of milk greater or less, as the case may be. With some persons, an immense quantity is secreted; at a single time a pint or more of milk may be drawn with a breast-tube from a single breast. "But we are not to suppose that all this amount of milk is contained within the ducts at the time we commence drawing it; a small portion may be there, but the greater part is secreted after we commence. After a time the power of the gland to produce it being exhausted, the milk ceases to flow; but after nature has been allowed to rest an hour or two, it again recovers its milk-giving power, and is ready to furnish it liberally, as before. A good cow has an udder, which, if we were to cut it off, could readily be put into a small pail; and yet this same cow is capable of giving milk enough at a single milking to fill two or three pails of the same size. This shows us how admirably fitted these organs are for pouring out that material which is so necessary for the sustenance of the young: a material, simple as it may appear, yet one which art and science, with all their boasted pretensions, cannot at all imitate. The chemist can tell us that milk is composed of a mixture of water, albumen, casein, and oil, which we call cream; but all the chemists in the world

cannot make a drop of milk, or any thing that, in physiological properties, will at all compare with it.

The breasts are abundantly supplied with nerves and blood-vessels, and it must be evident that so great a functional power as that which is exerted by the mammary gland during lactation, must be supported by a great quantity of blood and nervous force. Hence it is, that during nursing, the breasts are supplied with a much larger amount of blood, and are much larger in volume than at other times. In this wonderful fact, as in many others of the living body, we see the ever-beautiful order of nature, in adapting her means to her ends. If every thing happened by chance, we might just as soon find the breasts containing less blood when milk is needed, as more. But the doctrine of chance is too palpably absurd to need comment.

Symptoms of Inflammation of the Breast.—A day or two, or a few days after delivery, we often find the patient apparently so well and in such good spirits that we conclude there is no further need of our attentions. But in a day or two more we are sent for in great haste perhaps. We go, and find the patient downcast, dispirited, and evidently enough sick. We inquire as to what has been the matter. The patient tells us she has been attacked with a chill, in spite of which she could not get warm for one or two hours, or perhaps longer; just such a chill as would be experienced in the coming on of an ague, or any other fever, or some inflammation.

"Inflammation of the breast," according to a very accurate writer, Dr. Burns, "may be divided into three species, according to its seat—the sub-cutaneous cellular substance, the fascia, and the glandular substance.

"It may take place at any period of nursing, but is

most readily excited within a month after delivery. It may be caused by the direct application of cold, engorgement from milk, the irritation of excoriated nipples, mental agitation, etc. Some have the breasts prodigiously distended when the milk first comes, and the hardness extends even to the axillæ. If, in these cases, the nipple be flat, or the milk does not run freely, the fascia partially, in some habits, rapidly inflames. Others are more prone to have the dense substance, in which the acini and ducts are imbedded, or the acini themselves, inflamed.

"The sub-cutaneous inflammation, if circumscribed, differs in nothing from a common phlegmon, and requires the same treatment. It is not easy to resolve it, but a tepid poultice will do this, if it can be done; if not, it brings it forward. When it bursts, the poultice should be exchanged, in a day or two, for mild dressings.

"The inflammation of the fascia, if light, is marked by some little tension of the breast, with erythema of the skin over the affected portion. There is considerable fever, but not much pain, and the disease is likely to yield to tepid fomentations and a purgative, if the milk can be drawn off freely. If the fascia be more extensively or severely inflamed, the breast swells quickly, and this distention adds to the disease, which, indeed, is often caused, at first, by distention of the fascia. The pain is great, and the fever considerable. The inflammation never is confined to the fascia, but is communicated either to the subcutaneous cellular substance above it, or to the parts below it, usually to the former, and after, at the same time, to the latter.

"When the deeper parts are affected, the inflammation may be more or less prominent in the lactiferous ducts, or

a cluster of acini; or often in that dense, peculiar kind of substance, which is their medium of union, or in those fatty packets which are sometimes met with in the gland. Often it seems to commence in one of the sinuses near the nipple, and, spreading, involves the surrounding cellular substance. In this case, it becomes prominent, and seems as if quite superficial. Milk is not secreted by those acini which have suffered. Matter presently forms, and spreads under the fascia with much distraction; and when, at last, after long suffering, the abscess gives way, much pus is discharged, with pieces of slough, chiefly consisting of portions of fascia. Usually, there is a considerable degree of fever attending the complaint, and the pain is often severe, especially when the breast is extensively affected."

Treatment. — A great variety of methods have been adopted for the prevention and cure of inflamed breasts. This affection is often brought on, doubtless, by carelessness, neglect of drawing the milk from the parts sufficiently often in the beginning, excessive fatigue, seeing too much company, too much care and anxiety of the mind, overfeeding, hot and stimulating drinks, feather beds and pillows, overheated rooms, want of attention to bathing and cleanliness, and last though not least, excessive drugging; these are among the more prominent of the causes of inflamed breasts.

The first and most important consideration, then, is to avoid, if possible, the disease. *Mothers, and all of you who hope or expect to become mothers, if you wish to save yourselves a great deal of needless pain and suffering, a great deal of restlessness at night; if you wish to avoid one of the most troublesome and disheartening affections to*

which the female system is ever liable, I warn you in the strongest feelings of sympathy and regard for your sex, that you avoid, so far as is possible in the nature of things, the CAUSES *of this terrible disease.*

But some have poor, feeble, scrofulous constitutions, and cannot by any possibility avoid the inflammation of which I am speaking; and, do what we will—the best that, in the nature of things, can be—the breast must, I think, in some cases inflame, suppurate, and break. An accidental blow, likewise, so slight that it would scarcely be felt upon almost any other part of the system, may cause a mammary inflammation and abscess. And, worst of all, to think of many a poor mother who has so poor a habitation, is so much oppressed by the cares and perplexities of domestic life, and has such poor care and nursing that she is always in great danger of suffering with inflamed breasts.

The treatment of this affection, therefore, is a matter for the serious consideration of both parents and physicians; and, as I before remarked, a great variety of methods have been adopted for this end.

We should remember that we are to treat an INFLAMMATION, and that the plain principle of treating all inflammations, of whatever grade or kind, when of acute character, is the antiphlogistic or anti-inflammatory plan. By what means and to what extent to use these means, are circumstances in which the skill, tact, and good judgment of the physician are to be exercised.

A very common error has been to treat too much *locally* in this disease. This is, in fact, a very common fault in medical practice generally. I have no doubt that many an inflamed breast has been rendered worse than it other-

wise would have been by the too great amount of local means employed. In many such cases, doubtless, the breast has been made worse than it would have been had no treatment whatever been employed.

As soon, therefore, as the patient begins to experience a chill coming upon her, with pains in the back, limbs, etc., together with a general uneasiness and restlessness, and, perhaps, with an inflammation already commenced in one or both of the breasts, no time should be lost in setting at work resolutely to combat the approaching evil. The sooner we act, and the more prompt and resolute in the treatment, the greater the chance of preventing an abscess. We give the rubbing wet-sheet, if there is not already too much fever, the tepid shallow-bath, with a good deal of friction; a general cold-bath, if the patient is not too weak; the packing sheet, the wet girdle, wet compresses upon the breasts, injections of tepid water, and follow up the applications as much and as often as the symptoms may demand. Above all, the patient should not be wor ried by a multitude of ignorant and careless, though, per haps, well-meaning friends, who each and all insist that some particular poultice, or some favorite "cure-all" of theirs will certainly arrest the difficulty, if the patient will but condescend to use it, and that if she keeps on with the water, it will certainly cause the breast to break. How exceedingly foolish, ignorant, and prejudiced are the multitude in regard to these things! Every practitioner of water well understands how much we have to encoun ter in society, because of the prevailing ignorance of the most common remedial uses of the greatest and most abundant of all curative agents which God has given to man.

As regards the temperature of the applications, local and general, we do no violence to the system. Should we persevere sufficiently, we could cure almost any fever or inflammation with water at 80° Fahr., a temperature so mild that the most delicate child can bear it.

One thing in particular should be remembered: the patient should not be bundled up closely, and have a great deal of warm bed-clothing, under the impression that a cold will be taken if such measures are not adopted. We almost always find patients heating and injuring themselves in this way. But it should always be remembered, *that when a fever or inflammation is already present, it is not possible to take an additional cold.*

As for local applications upon the breasts, fine wet linen cloth should be used constantly. As to the temperature, I think it best to consult the patient's feelings merely. It is, perhaps, best to alternate somewhat; sometimes to apply warm or tepid cloths, at other times cold. I think a change is often good; at any rate, we should keep the parts constantly wet.

The wet cloths are covered with dry ones, or flannels, if necessary; but if there is great heat in the part, it is best to leave the compresses uncovered, so that by evaporation a much greater amount of heat may be thrown off. Sometimes the breast becomes so heavy and painful, that it is a great comfort to the patient to have it suspended in a sling.

I have already hinted how important it is to keep the milk well drawn. The mouth of an adult person is one of the best means, and the infant is often able to do good service in this way. Some get along pretty well with a tobacco pipe. But the instruments generally found in the

shops are illy suited to their object. One form, the suction-pump, is an invaluable piece of mechanism, provided the glass that fits upon the breast be of the right shape, and have an opening sufficiently large to admit a man's thumb. Generally, they are much too small, causing a good deal of pain when used; but if they are of the right make, they will draw the breast with more comfort and less pain than the infant itself.

Before the breasts are drawn, they should be well washed, for this will always help the milk to flow; and in connection with this subject, there is one highly interesting and instructive fact in regard to bathing. Thus, a patient may be in a condition in which, in consequence of the inflammation present, no milk whatever can be obtained. But we give the patient a good ablution of the whole body, even a simple tepid-bath, and directly we may succeed in getting milk; and in some instances it is made actually to drop of itself from the breasts. Even the washing of the breasts alone will sometimes cause it thus to flow.

Should an inflamed breast ever be opened after the matter has once formed? The most common practice has been to do it. Dr. Gooch, however, who is high authority with the profession, speaking of this disease in that state in which the matter approaches the surface, says: "Will you open the abscess? If you do, you will relieve your patient from suffering, and by the evacuation of the matter the constitutional disturbance ceases; but the wound will not heal so soon, and the maturation of the abscess will not be so complete as if the whole process were left to nature." I have myself opened them at the request of patients in some instances; but I have become

convinced that it would have been better, in the end, not to do it.

Dr. Burns tells us—although he recommends opening the abscess—that the puncture is liable to be followed by a troublesome oozing of blood from the wound, and that in one instance he knew the hemorrhage to prove fatal.

After the abscess has burst, there is for some time a discharge of purulent matter, which is not unfrequently mixed with milk. The utmost cleanliness should be observed, and a considerable amount of general, as well as local treatment should be kept up until the healing is fully effected.

Thus, then, in the use of water, locally and generally applied, together with the proper adaptation of the other hygienic means, I consider that we have a remedy which far surpasses all others in that troublesome affection of which I am treating; a remedy which, if it cannot always cure the inflammation without an abscess, will yet so much mitigate it, so much promote the healing, and so much support the patient's strength, that mammary abscess, if it must occur—and I think, do what we will, in some few instances such must be the case—it is yet stripped of its greatest horror, and rendered, generally, a comparatively trifling affair. Such has been my own experience, and such, I think, will be found to hold good wherever the water-treatment is faithfully and skillfully applied.

Dr. Burns has given us a sad picture of what not unfrequently results from mammary abscess; and that the reader may have, on good authority, an account of the sad condition which sometimes results from the affection, I quote his own words:

"It sometimes happens, if the constitution be scrofulous,

the mind much harrassed, or the treatment not at first vigilant, that a very protracted, and even fatal disease, may result. The patient has repeated and almost daily shivering fits, followed by heat and perspiration, and accompanied with induration or sinuses in the breasts. She loses her appetite, and is constantly sick. Suppuration slowly forms, and perhaps the abscess bursts, after which the symptoms abate, but are soon renewed, and resist all internal and general remedies. On inspecting the breast at some point distant from the original opening, a degree of œdema may be discovered, a never-failing sign of the existence of deep-seated matter there, and, by pressure, fluctuation may be ascertained. This may become distinct very rapidly, and therefore the breast should be examined carefully, at least once a day. Poultices bring forward the abscess, but too slowly to save the strength, and, therefore, the new abscess, and every sinus which may have already formed or existed, must be, at one and the same time, freely and completely laid open, and, so soon as a new part suppurates, the same operation is to be performed. If this be neglected, numerous sinuses form, slowly discharging fetid matter, and both breasts are often thus affected. There are daily shiverings, sick fits, and vomiting of bile; or absolute loathing of food, diarrhea, and either perspiration or a dry, scaly, or leprous state of the skin; and sometimes the internal glands seem to participate in the disease, as those of the mesentery, or the uterus is affected, and matter is discharged from the vagina. The pulse is frequent, and becomes gradually feebler, till, after a protracted suffering of some months, the patient sinks. It is observable, that often, in those cases which seem to depend on a constitutional cause, and when there is great

debility, the sinuses heal rapidly, after being laid open, but a new part instantly begins to suppurate. Internal remedies cannot be depended on here, for they cannot be retained. If they can be taken, they are those of a tonic nature that we would employ, with opiates to abate diarrhea and procure sleep."

LETTER XXXVII.

CASES IN MIDWIFERY.

A Collection of Facts Illustrative of the Effects of Water-Treatment before, during, and after Childbirth.

In the year 1843, at which time the water-cure had been heard of this side of the Atlantic only by a very few, I for the first time applied water-treatment in a case of midwifery. I had, it is true, been for months, and I may say years, studying upon the matter, as a student of medi cine who is determined, above all things, to learn and practice the truth, ought; yet I had no opportunity of bringing the principles which I believed in to bear directly upon any given case previously to the period referred to. The following, then, are some of the leading particulars of my first case:

Case I.—The lady was a resident of this city, of a feeble constitution by inheritance, and, I think, twenty-one or two years of age. For three or four years previous to her confinement her health had been, on the whole, much improved. Her constitution seemed, indeed, to undergo a remarkable change for the better, in consequence of leaving off tea, coffee, spices, butter, and flesh meat, and at the same time practicing the daily bath. She, in short, became, as her flesh-eating friends said, "a thorough Grahamite." Notwithstanding her improvement, however,

she suffered miscarriage two or three times in as many years.

During the period of pregnancy of which I am speaking, I advised her to be very particular in keeping up her baths, exercise, diet, etc. She followed the advice faithfully. She suffered somewhat from neuralgic pains in the abdomen, but these were in general readily checked by the use of wet compresses, and the sitting and other baths. Few patients have ever been as faithful as she was in carrying out all good rules. She kept up her bathing and exercise to the very day of labor.

There was one circumstance which operated against her a good deal toward the close of the period. A worthy and skillful medical friend advised that she should have premature delivery brought on, because her pelvis was, as he said, too small to allow of the birth of a full-grown child. This advice, however, she would not, on any account, entertain, notwithstanding she had the utmost confidence in the skill and honesty of her friend. She resolved to trust God for the result, although she was well aware that she was to pass through a most fearful ordeal of danger and suffering. As it proved afterward—for she has borne a number of children since—her own instinct was better than all the knowledge of her medical friend.

Her labor was a very severe one, and she met it with most praiseworthy courage. She was at length delivered safely. The child was of more than average size, but owing to a malformation it could not live. Her maternal feelings were of the strongest kind, and the loss of her child was a great blow upon her spirits. She was, however, up daily, more or less, from the very first. Indeed, it was not two hours after the birth—she having been

awake all night—before she stood up, and was thoroughly washed in cold water from head to foot. She knew what cold water had done for her before, and she was not afraid that it would fail her now in her time of need.

She pursued the treatment from day to day, observing the greatest care not to overdo. She understood well, young as she was, the great importance of mental quiet under such circumstances, and saw no company for many days. On the sixth day she had so far recovered as to be able to walk to the Battery, a distance of a mile and a half. The weather being hot, she rested awhile upon the shady seats of that beautiful inclosure, and was much refreshed with the sea breezes which are so genial at that season of the year. Afterward she walked back home, making, in all, a morning excursion of three miles.

This, then, I put down as one of the first of the American cases of hydropathy, and *the* first in childbirth. Thanks to Priessnitz, there have been thousands since.

Case II.—June 26, 1846.—Two weeks ago, Mrs. E., of 56 Prince Street, informed me that she had arrived very near the end of the period of her first pregnancy, and that she desired me to attend her in childbirth. By conversation I soon found she was well-informed in the new system, and the modes of preserving health, and this without her having had any particular advantages for acquiring such knowledge. She had read faithfully and understandingly upon the subject of health, a duty which too few mothers observe. Mrs. E. is about twenty-two years of age, with constitution naturally very good, although not remarkably strong. Her attention became directed to bathing about two months since. She performed two ablutions daily, and took sitz-baths; discontinued the use of tea and coffee, took

very little animal food, living principally upon coarse bread, hominy, cracked wheat, and fruits. She took frequent exercise in the open air, and by these means became sensibly invigorated in general health, and was kept perfectly free from unpleasant symptoms of every kind. I advised my patient to go on as she had done perseveringly and to the last. Her very kind and affectionate husband and her mother, as well as other good-meaning relations, insisted that she should take a different course, particularly in food and drink. But she chose understandingly to pursue her own way, feeling full confidence that she would be able to prove to her friends that she was in the right, and that young persons were not necessarily less knowing than older ones.

June 26.—To-day Mrs. E. sent for me early in the morning. She had experienced by turns slight labor pains from 9 A. M. the day before; was not able to sleep much in the night. Took baths as usual, and walked in the open air. This morning she practiced general ablution and sitting-baths as usual. Cold water renders the pains more efficient, which is a good symptom. Walking about the room has the same effect. The pains increased very gradually, and this afternoon, notwithstanding they grew more severe, she was able to sleep at times between them. These continued to increase until six o'clock this evening, at which time she gave birth to a remarkably fine, healthy daughter. In a few minutes the after-birth was expelled, and no undue flooding occurred. Wet towels were placed upon the abdomen and the genital parts, and the face, hands, and feet were sponged, each of these applications having a most soothing and refreshing effect.

In the case of the infant, care was taken to avoid the

great error so generally practiced, of separating the cord by which the child is attached to the mother, too soon.

The separation after due time being made, the infant was washed in soft water made very slightly tepid, with the addition of a little mild soap. No bandage was put about its abdomen, for the reason that it always causes more or less harm—that is, if there is no malformation of parts, and always tends to induce the very difficulty it is designed to prevent, viz., that of rupture. The kind-hearted mother of Mrs. E. insisted, as a matter of course, that the bandage should be applied as in the good days of old, but Mrs. E. said "*Do as the doctor says.*" Very light muslin clothing was then placed upon the infant, after which it was left, without drug or dose, quietly to sleep.

9½ *o'clock, Evening.*—Returned. Mrs. E., happy and contented, has been enjoying sound, refreshing sleep. Has had no nourishment since morning. Took then a little fruit. Prefers to wait until morning before taking any more. I recommended her to take fruit every day from the first, that the infant may be accustomed to her doing so. If mothers omit fruit for a while and then commence its use, the milk generally distresses the child. I believe that, as a rule, the judicious use of well-matured fruits will not cause any difficulty in the child, provided the above direction is from the first and onward complied with.

Mrs. E. is now to take a bath—that is, with assistance, the whole surface is to be cleansed, portion by portion, by means of cloths wet in moderately cold water. This will cause a sense of great comfort—will increase the strength and promote sleep. As is very common on such occasions, the friends object strongly to the use of cold water. "Oh, it will give you a death cold! how can you do it?" and

the like expressions are used. But the patient well understands that she needs the invigorating and soothing effect of the ablution, and that when the system is sufficiently warm, it will not only be perfectly safe, but highly beneficial. She prefers, as she has done, to practice upon rational and well-ascertained principles, rather than to be guided by the whims and caprices that custom with its iron rule entails upon society.

First Morning after Confinement.—June 27, Six o'clock.—Mrs. E. slept sweetly and soundly during the whole night, waking only a few minutes at one time. She feels greatly refreshed, and able to rise and take a bath; judges by her feelings that she will be benefited by sitting up; has a good appetite. I advise her to sit up as much of the time, little by little, as she feels inclined. She proposes eating very sparingly of well-boiled cracked wheat, with a little uncooked milk and berries.

Half past Nine, P. M.—Mrs. E. has sat up at different times during the day. No after-pains or particular discomfort of any kind. Every time of sitting up has done her good. She has taken food at three different times. Will take a sponging now, and retire to rest.

Second Morning after the Birth—Mrs. E. slept remarkably well during the whole night. Has been up, performed a bath, walked about the room, and is much invigorated. Felt decidedly the need of the bath; it strengthened her much. Has no after-pains or difficulty of the breasts. The milk secretes abundantly. The bowels are moved by injections of tepid water. Mrs. E. will sit up the greater part of the day.

Third Morning after Birth.—Eleven, A. M.—Mrs. E. rested well during the night. Arose at six, and took her

usual bath. Reclines now awhile. Would be able to walk up and down stairs were it necessary. Her infant is remarkably well, and sleeps the greater part of the time. Mrs. E. is one of that very small number of mothers that has energy of character, resolution, and system enough to nurse her infant regularly, and not during the night time. Once in three hours, between 6 A. M. and 9 P. M., at the very most, is as often as she will allow it to take the breast.

Seventh Day.—Mrs. E. has been improving day by day, from the first. She has had no inconvenience whatever; no pains of any kind, no swelling of the breasts or feverishness. Has well-nigh her natural amount of strength. Her infant, too, is doing remarkably well.

Case III.—Nov., 1845.—Mrs. C., a poor woman of this city, not long since made known to me, that in her destitute condition she would receive, as a great favor, if I would attend her in childbirth. She informed me that on previous like occasions, she had suffered beyond description, both at the time of confinement and subsequently. She had borne two children—the first it was necessary for her physician to destroy before the birth could take place. The birth of the second was also attended with the greatest difficulty. It was now some weeks before her expected time. Her husband had deserted her, so that she was compelled to follow her occupation (that of a seamstress) during the whole day and much of the night. From this constant sitting and confinement within doors, she had become much enfeebled, and had a severe and constant pain in the side.

I directed her to wash the whole body daily twice, when not chilly, in Croton water, and to take each half day as much exercise in the open air as she could possibly find

time for, and could practice without causing too great fatigue. The woman followed the directions, and was at once sensibly benefited. The severe pain in the side left her almost immediately. When her period arrived, delivery took place in a very short time, and with comparatively little suffering. Bathing in mild forms was practiced the day of, and subsequent to, delivery, and the patient walked about each day, and was scarcely *confined* a single hour.

There is one fact to be mentioned in her management of the infant. She was directed at first to have it washed in tepid water. Supposing she would follow the same course for the future daily washings, I made no further inquiry till some days after, when I ascertained that she had used the water of the natural temperature. I asked her why she did not moderate the temperature of the water as at first, and as people generally do. She answered, that when she bathed herself before the child's birth, every bath seemed to strengthen it very much; and, therefore, she chose to use the cold water now for the same reason. She had the good sense always to keep the child sufficiently warm, particularly after the bath. It is proper to mention that the Croton water at this time was not far from 65° Fah. The child has been, and is now, one of the healthiest and most vigorous I have ever seen of the age.

The above notes were written some months since. The case is again brought to mind, by the mother's coming today to work for us at her usual occupation. She says, "What a strange thing it is, my little baby has never been sick a single hour. What wouldn't I give if my other boy could have been so." The child is one of the brightest imaginable; knowing, observing, good-natured, and now, at the age of six months, sits near his mother, playing,

laughing, crowing—the most perfect picture of health. He is every day once, and generally twice, washed in cold water.

Case IV.—Oct. 25, 1847.—The same woman was again confined early last spring. She had been living, I found, in a small cellar-room, where there were but three small panes of glass, and to which the sun could never come. The place was damp and dark, and the air necessarily very foul, it being in an alley in which many poor, dirty families were living. Here the poor woman lived, paying an exorbitant rent, supporting herself and two children by the hardest work rather than beg.

The night of her confinement was a very stormy one. The wind howled among the old buildings, tearing off shingles and shutters, and the rain poured down in perfect torrents. Ships were lost that night, and sailors, with the captain and officers, swept overboard.

The labor this time, as before, was an easy one. It took place at midnight. Every thing went on well, and she was, after a reasonable time, left to get sleep, as we supposed she would. I found, however, in the morning, that, notwithstanding she had been wholly free from pain, she had not slept at all. She acknowledged that, powerful as had been the effects of water for good at the previous time, the old ideas had yet haunted her, that she must either die, or submit to the application of those terrible instruments that had been used in her first confinement. She now felt so rejoiced at her getting through again safely, that she could not sleep at all. So we found her in the morning early, she, her two children, and the new-born babe, all on one narrow settee bed together, apparently contented and happy.

Two ladies who understood these matters of water treatment, went now, it being Saturday morning, and administered our patient a bath. The water was moderated a little, but left still quite cool. This day she could obtain no sleep, for she had but one room, and the children must remain there. She sat up considerably, but not so much as to cause over-fatigue. In the evening the ladies went again, and administered the bath. She slept well during the night. The next morning, Sunday (the second day), the ablution was administered at 7 o'clock, at which time the patient arose. She remained up all day, until 10 o'clock in the evening, at which time the ladies again administered the bath. She slept well this night, was up all the next day, and so onward, and has been constantly well up to the present time.

Case V.—Dec. 12, 1845.—Was called in the night between one and two, by Mr. Brown, living at 40 Oliver-st., to visit his wife, then in labor. At the beginning of the evening previous, Mrs. B. began to experience premonitory symptoms—took, as usual, a sitting-bath, reclined upon the bed, and slept about three hours, when she was awakened at 10 o'clock by labor pains. These occurred regularly until the time of our arrival and onward, growing more and more effectual, until four in the morning, at which time she gave birth to a fine healthy daughter. The after-birth was cast off in a few minutes, after which Mrs. B. felt easy and inclined to rest. After being made comfortable, she was desired to sleep awhile, and was told that she would be refreshed and invigorated by an ablution after sleep, and that she would be able to sit up a short time by way of a change.

Nine, P. M.—Returned to see Mrs. B. Found her

quite comfortable, after-pains slight; had slept a part of the time. From the commencement of labor she had drank as freely of Croton watar as was desired—had drank nothing but cold water for about a year. Had she been accustomed to warm or hot drinks there would have been a liability to increase of after-pains by taking cold water. In such cases the drink must be warm, unless there is much feverishness and thirst, in which the cold drink would be tolerated and most agreeable. Appetite was good. Mrs. B. said she could relish any thing; was very fond of Indian mush, with a little syrup; thought she had better not take any thing till dinner time—she would drink water, and be on the safe side. To this I of course agreed. She felt none of the giddiness, nervousness, great weakness, and depression of spirits she had always hitherto felt after childbirth. There was now and then a slight after-pain. She sits up little by little, and drinks water when she feels an inclination. She will take food once to-day, that is dinner, and I will come again by evening.

Seven, P.M.—Returned again. Mrs. Brown has been sitting up and bearing her weight at different times during the day. She ate of the plain favorite dish, Indian mush and molasses, with a piece of dry bread, and water to drink. The bread tasted very sweet, the appetite was so good. The husband had now returned, and the bathing could be carried out. A wash-tub was brought into the room, and placed before the fire to be warmed. At the same time, water, warm and cold, was procured. A stick of wood was placed under one side of the tub, and thus the two-fold object of a hip and general rubbing-bath could be accomplished at the same time. Mrs. B. walked to the tub, and, her husband aiding, took a good bath. The water was

made mild, of about 80 or 85. Fah.; while sitting in the bath, the body being well guarded all about with blankets, a good deal of rubbing was practiced upon different parts of the system, and particularly the back. This had the effect of promoting after-pains, and of strengthening the part, and in fact the whole system, very much. The lower extremities were, of course, outside the tub, and those were bathed afterward. A night-bath of this kind at such times seems, indeed, to increase the strength ten-fold. Pains are relieved, the nerves strengthened, and a wonderful change wrought.

Second Day (*Sunday*), *between Eight and Nine, A. M.*—Mrs. B. slept well during the night, and until late this morning. All were in bed so long, and as Mrs. B. appeared so well, it was thought best, for want of time, to omit the general bath until toward dinner. Told her that, for a change, it would be best to go occasionally to other parts of the house; but to be careful not to overdo, or to be up too long. At any time pain or weakness was felt in the back, a good rubbing of the part with the wet hand or towel would prove very serviceable. Requested Mr. Brown that an enema of tepid water be administered. This could be repeated twice if necessary to cause the desired effect.

Six o'clock, P. M.—Mrs. B. has eaten to-day sparingly twice, a breakfast and dinner, the last with her family. Has walked up and down stairs without inconvenience or assistance.

Third Day (*Wednesday*), *A. M.*—Mrs. B. rested well last night. Feeling a little fatigue the preceding evening, she concluded to omit the bath. It would have been refreshing, however, but this morning she feels remarkably well, and has been doing light work. Has been up nearly all

the morning. Took the sitting and general rubbing-bath early before breakfast. Was cautioned not to be up or to do too much. Food to be plain, as usual, and the drink, cold water.

Seven, P. M.—Mrs. B. has been up most of the day. Appetite remarkably good; thinks she took a little cold by sitting unconsciously in a draught of air. A carious tooth commenced aching, which proved a warning. There has been some feverishness, probably nothing more than milk fever. This will be prevented by the tepid-bath, the latter to be repeated as often as the feverishness returns, if such should be the case. There has been some caking and pain in the breasts. The pain is effectually removed by perseverance in placing very warm or hot wet napkins upon the breasts, covering these with dry warm flannels, and repeating them very often until the pain is relieved. Breasts to be well drawn, and the bowels moved by a full injection of tepid water. If Mrs. B. perseveres as she always has, she will have a good night's rest.

Fourth Day.—Mrs. B. rested well; continues the baths, plain diet, sitting up, and moderate exercise, as usual, and is progressing rapidly toward firm health and strength.

Fifth, Sixth, and Seventh Days.—Mrs. B. proceeded cautiously, and with the most favorable results.

Eighth Day, Eleven, A. M.—Mrs. B. has been about all the morning, has been giving way to her great propensity to industry, practicing at the wash-tub. She does not believe at all in idleness. The only danger is that she may do too much.

Ninth Day.—Mrs. B. is about as usual; feels that she has an abundance of strength to walk some distance in the city. She could walk out with impunity, notwithstand-

ing the weather is very cold, but it is thought best, on the whole, since she is so much about house, and pays so much attention to bathing and ventilation, that she should remain within doors yet, a little.

She says that at the end of three weeks from the birth of the child next older, when beginning to attempt to sit up, she was weaker than she has been at any moment since the birth of the last one. With all her children she has been very weak.

Case VI.—Late in the month of January, of the present year (1850), I was called early in the morning to visit a young married lady, in Fourth Avenue, who was said to be in great suffering from spasms and vomiting. She had not slept during the night, and it was necessary for her husband to remain up with her the whole time. I found her with very high general fever, and oft-recurring spasms, attended with bilious vomiting. The fact of her being in an advanced stage of pregnancy, with this complication of untoward symptoms upon her, designated the case too clearly to a practiced observer, as being one of both delicacy and danger. The parties in the case had no knowledge whatever of the water-cure, or of my particular methods of treatment, and had called me, being the nearest physician, and, as they supposed, of the old school. No medicines had as yet been administered, but the patient, as is common on such occasions, had been deluged with a great variety of articles, in the way of liquid food and drinks, with the hope of "settling the stomach," a process which can seldom succeed, and, as often practiced, is quite sufficient of itself to make even a well person sick.

The patient and her husband both thought, as a matter of course, that "some physic must be given." I told them

we would first give a tepid-bath, at 70° Fah. This I assured them would give great relief, and knowing well, too, the great prejudice among English people (for they were English) against bathing in pregnancy, I aided the husband, with my own hands, in administering it, thus to be certain of its being well and faithfully done. This they both thought at the time a rather harsh method of treatment; but they had employed the doctor, and he being resolute and determined, they could not refuse. The bath gave great relief, and then, all shivering and cold, a very large wet girdle was put upon the patient, after which she was wrapped warmly in bed, with moderately warm bricks to the feet.

After having allowed the patient to rest awhile, a large injection was administered, and with the best effect Occasionally, too, retching still occurred (for symptoms of this kind never cease suddenly, and, indeed, should not), at which times tepid water was given freely to drink, for the purpose of aiding vomiting.

Thus the treatment was pursued: as the symptoms appeared to demand, the tepid half-bath, with a good deal of friction, the wet girdle, constantly or nearly so, the injections, and the water-drinking were kept up From the first moment onward, the patient recovered as rapidly as could be desired. She slept a good deal during the day, and also well at night. The next morning she was quite well, although weak. She then commenced taking nourishment gradually. No further serious troubles were experienced during the period of pregnancy.

The 4th of April, 1850, the above-mentioned lady, at about the end of eight months of pregnancy, as was supposed was delivered. There was more or less of pain

during thirty-six hours previous to the birth. The pains were rather severe during the most of twenty-four hours, proving that good health, with abundant exercise and bathing, are not necessarily of themselves capable of causing short and easy labor.

The child was born at about five o'clock in the afternoon. Soon a thorough ablution was performed in the sitting-bath. No patient ever had a better understanding of what was necessary in the case, and none, certainly, could be more free from all sensations of false modesty or delicacy; nor could any one pursue the treatment with greater confidence than she did. There was no time when she could not easily sit up or stand, if necessary, and, with the good nursing of her husband, she improved most rapidly. She wore the wet girdle most of the time, alternating, however, now and then, with simple fomentations. She bathed four times during the first twenty-four hours after the birth, washing the whole body thoroughly at each time, the water being moderated to from 60° to 70° Fah. She sat up during this time about six hours in all, and walked by spells a little in her room. She suffered somewhat with after-pains, but the means before mentioned, together with injections to the bowels, generally brought relief. All along her appetite and sleep were good.

The second day the patient sat up most of the time, and walked to other parts of the house, and for an hour and a half visited a friend. She could have gone abroad in the open air, had it been necessary for her so to do.

The third morning, that is, when her infant was two and a half days old, the patient walked with her husband a distance of about three fourths of a mile, visiting a friend. She

was fatigued somewhat, but, on the whole, benefited by the undertaking.

After this, she walked abroad in the open air daily, always having to go down from the third story of the house in which she lived. In one week she went about the city, teaching her scholars in French, German, music, etc., as she had done up to the very day of labor.

And now, to exhibit things in their true light, let this lady's case, as it occurred under water-treatment, be contrasted with the drug-treatment employed on a previous like occasion.

Between two and three years before, she was pregnant with her first child. Then, as during the last time, she was attacked with cramps, vomiting, and fever. She was laid by a fire in an almost insensible state, and had mustard draughts placed over a large part of the surface. She was also dosed a good deal internally, and salivated with calomel.

At labor, as well as during pregnancy, she was attended by one of the best physicians of London. It was three weeks before she could leave her bed; in four weeks she left her room for the first, and did not go out of the house until six weeks had elapsed. *She was then no stronger than in two days after confinement, under water-treatment.*

Here, then, was a great difference in the result of the two methods—a difference so great that it cannot possibly be appreciated, except by those who have actually experienced them in their own persons.

One fact more should be mentioned in this case; the lady had been exceedingly depressed in mind through the whole, or most of the period; she, with her husband, having left the Old World for the New. A combination of cir-

cumstances most perplexing and depressing had worked upon her mind, and she was haunted perpetually with the idea that she must die a stranger in a strange country. Thus things went on till about nine weeks before she was confined, or the time before-mentioned, of her acute illness. But no sooner were the laws of life, health, and disease unfolded to her ever-active and intelligent mind, than she at once set resolutely and cheerfully to the performing of every task. No item in the way of bathing, exercise, diet, etc., was ever omitted. The story of her case tells whether or not she was rewarded for her faithfulness.

Case VII.—Early in the morning of the 22d of May, 1850, I was called to visit a lady of this city, about thirty years of age, far advanced in her sixth pregnancy. She had, during this period, as before, been much in the habit of taking alcoholic stimulants, principally in the form of brandy, judging, from her feelings, she needed the stimulus. But its only effect was to render her at all times much more liable to take on inflammatory disease.

Four days before I was called, this lady was taken with very severe bilious vomiting, and cramp of the stomach. Two physicians were consulted, and a variety of medicines used. Still the patient continued, day by day, to grow worse, and could get neither relief nor sleep. Being told that she was in danger of convulsions, she and her husband concluded they would change their physician and try the water-treatment.

I found the patient then retching and vomiting almost incessantly, the stomach cramping, the bowels constipated, with high general fever and flush of countenance, the pulse being 130 per minute, or about double its normal beat, and the patient had not slept for three days.

Treatment.—This was very simple. The whole body was well washed in water at about 80° Fah., a full clyster was administered, and wet, cooling fomentations were put freely over the chest and abdomen. Almost immediately the patient experienced a short but refreshing sleep. The cloths were changed often, the surface was sponged as it became too hot or uncomfortable. The general washing in the wash-tub was practiced once in four hours from the first, which always brought sleep. When retching and nausea came on, tepid water was taken freely to help the vomiting. This gave great relief. No other drink than water was taken, and no food until the vomiting had ceased. After this, well-boiled Indian-meal gruel was given, beginning with a single tea-spoonful at first, and then increasing the quantity as could be borne, at the next regular meal-time. After the first day the patient was bathed three or four times in the twenty-four hours. The clysters and fomentations were continued as circumstances required. No very cold water was used in any form.

In three days' time the patient was up and about, and in all respects quite well, though somewhat weak.

Eleven days after commencing the treatment in the above case, namely, on Sunday morning, the 2d of June, 1850, the patient was taken very suddenly in labor. Within half an hour after the very first sensation of any pain, and before her husband could call me, her child was born, a sixth son. She suffered but little, and was delivered while in the standing posture, but the after-birth remained unborn. I found her weeping for fear that she would be subjected to some horrible water-applications, of which she had read. I told her that my mode of practice was altogether different from that which she so much

feared, and that, at any rate, no honest physician would ever subject a patient to any process which she could not heartily concur in. I told her, moreover, that I would much prefer that she should have her old physician if she chose, and that she could not possibly offend me if she would but frankly take her own choice. Her husband then desired that she would pursue that course which she herself preferred. With the explanation I had given, she concluded at once to go on with the matter as I might see fit to advise. "Well," said I to myself, "we will see how a mixed treatment will answer—a little of the old, and a little of the new."

The patient was perfectly willing to be bathed in tepid water, which I also advised. But she wanted the old-fashioned obstetrical bandage or binder, as she had used it before. I explained to her all about its nature and effects, and consented that she might use it if she would take it off at each time of bathing, and at all times when she found it causing too great heat. Her husband bathed her four times the first day in bed; the women would not help at all. She was able to sit up in bed, and the second day and onward, she bathed herself, the old nurse always making herself absent at the time. She had suffered with afterpains before, but nothing worth mentioning this time. Injections were used from time to time, and the wet towels over the abdomen. The second day the patient was up in her room. The third morning, as I went to her door, I heard some one singing, and, on entering, found it was the patient herself, alone, sitting up with her infant in her arms.

The fourth morning the lady was so well that there was no excuse for a doctor any more. She said she had to

keep her room, and mostly her bed, for four weeks always before. Now in three days she was perfectly well, bathing herself repeatedly every day; whereas always before she had never dared wash herself short of a whole month, *and then only with whisky!* She was now convinced that the only safe way to prevent taking cold, was *to bathe.*

This, then, may be put down as a remarkable case. Eleven days before labor the patient was very dangerously sick. The birth was exceedingly easy and short; and, although such labors are not, on the whole, as safe as those which are more difficult and protracted, she yet recovered her usual health in a remarkably short period of time, and without any mishap or pain. She bathed but very little, comparatively, although that little told well. No application whatever of cold water was made.

Case VIII.—While the cholera was committing its fearful ravages in the city of Brooklyn, during the summer of 1849, a worthy and intelligent lady, the wife of a sea captain, was preparing to leave for the country, whither I was to go with her to attend her looked-for case of childbirth. Monday, the 9th day of July, she was busy packing trunks and preparing to move, and probably overworked. At all events, she did not feel well, and experienced pains similar to those of labor, all day Tuesday. I remained in the house over night, but in the morning the patient was better. Still there occurred at times periodical pains, and I told the patient that if they were true and natural pains of labor, a bath would accelerate and make them worse; or if they were false pains, and such as did not indicate the near approach of labor, the bath would cure or render them less. They were, however, increased.

At eight o'clock in the evening labor came to a close,

the result being a fine, healthy, female child. One hour after, namely, at 9 o'clock, the patient feeling rested, was helped into a sitting bath-tub, and well washed, for some minutes, over the whole surface. The water was fresh and cool from the cistern. As may be imagined, the patient felt incomparably more comfortable after a good cleansing in this manner, and a degree of refreshment that can be conceived of only by those who have had the practical illustration of it in their own persons, was experienced. A plenty of wet linen towels were placed over the abdomen and genitals, and by these means the patient was enabled to pass, on the whole, a very good night.

She had, she informed me, always suffered intolerable anguish for days after the birth of her other children, five or six in number, I believe. Even with the first—a thing very uncommon—she had experienced most severe torture. It was therefore a great object at this time to do every thing possible to prevent the after-pains. Toward morning, as she began to grow more warm, the pains came on in a slight degree.

At 6½ o'clock (the 12th, the first morning after the birth), the patient was again thoroughly washed from head to foot in the hip-tub. After this a large linen sheet, the whole being wet, and folded in the form of a very large girdle (large enough to cover the whole trunk of the body), was employed. It was wrapped round from end to end, its object being to act as a great and moderately cooling, and necessarily soothing fomentation, to the body, to keep off inflammation and subdue pain. The weather being most excessively sultry and hot, only one dry sheet was placed over her as a covering. She was to remain in this condition so long as the wet sheet did not become uncom-

fortable or too warm. At 10 the same forenoon, after having slept a good nap, a second ablution was practiced.

She now took a trifle of nourishment in the form of oat-meal gruel, the first since the birth of the child. The two whole days previous, likewise, she had not eaten in all the amount of half a common meal. This three days' abstinence proved a most valuable means in warding off fever and pain. Nor did it materially impair the strength.

In the afternoon of the same day (the 12th) the patient again took a good bath, fresh from the cistern. She slept considerably both forenoon and afternoon, *and suffered positively no more pain.* She sat up in her rocking-chair to rest herself in the afternoon and evening, at which time still another bath was to be repeated; but feeling so comfortable, and sleeping withal, she concluded to omit it.

The next morning (the 13th) the patient sat up and took her breakfast, namely, a small piece of simple brown-bread toast.

Thus she went on, bathing and using the fomentations freely each and every day, and very soon regained her full strength. Indeed, she was not at any time so weak as to prevent her walking. She always, after the first night, appeared happy, cheerful, and smiling. She now had no pains whatever, while always before, in childbed, she had suffered greatly for many days after the birth.

The peculiarities of this case are the following:

1. The patient bathed during the whole period of pregnancy daily, by means of that invaluable application, the dripping or rubbing wet-sheet.

2. She wore, of her own accord, the wet compress over the stomach the whole time of pregnancy, night and day; a means which seemed most effectually to prevent heart-

burn, nausea, and a host of stomach difficulties, to which she had on previous like occasions been subject.

3. The very abstemious diet subsisted on. She ate much of the time but little else than brown bread and water, and this in small quantity.

4. The extreme heat of the weather.

5. The fact that epidemic cholera was raging most fearfully at the time, in the same neighborhood.

6. The great amount of treatment that was practiced.

7. The freedom from all after-pains, to which the patient had on all previous like occasions been subject.

8. The great rapidity with which she recovered her full strength.

Let those who would imitate a treatment of this kind, be sure of the *principles* on which they act. Experience is the great teacher in these things. The timid and inexperienced must be content to practice in a less heroic mode.

Case IX.—July 15, 1850.—This is the case of a lady who resided in our establishment, about thirty years of age, of delicate health, and scrofulous tendency. She bathed through her whole period, and paid tolerable regard to diet, but was too much encumbered with domestic duties to allow of suitable exercise in the open air. This was her second pregnancy.

She came to labor very suddenly on the evening of the above date—labor lasting only about half an hour. The pains were exceedingly severe. The presentation of the child was an obscure one, but I succeeded in bringing down the feet foremost, and then, by arranging successively the body and the head in a proper position, I met with no serious obstacle in effecting the delivery. The after-birth

came away in a short time, with very little manual aid. Cold wet cloths were at once placed over the abdomen, genitals, and thighs, and often renewed. There were some after-pains. After resting half an hour, the patient was raised as she desired, placed in a hip-bath, and thoroughly washed all over with water, temperature of the Croton, and which produced an effect which she designated as "heavenly." A folded wet sheet was placed about her body, and being left in a condition which would not allow of her becoming either too hot or too cold, she soon slept sweetly. She had also slept somewhat before the bath. Changing the wet application from time to time, she obtained a very good night's rest.

The next day she used the wet applications according to her feelings of comfort, and was washed four times thoroughly from head to food in a hip-bath. Immediately after the first bath, early in the morning, she sat in a rocking-chair, had water brought to her, and then washed her infant, unaided, with her own hands, because no one could perform this important duty so well as herself; she continued so to do daily from the first.

She was herself bathed three or four times daily until she was perfectly recovered, which was in a very short time. She sat up four hours the first day, and so onward. Her infant did remarkably well.

About midsummer, 1847, this same lady was confined, under my care. Not long before the beginning of pregnancy at that time, she had suffered from a very severe attack of fever; but by dint of perseverance in good habits, she got along very well through the period, though the labor was a severe one, and the perineum became torn. There was likewise some trouble from swelling of the

breasts. But notwithstanding these drawbacks, she was able to sit up, walked out very soon, and on the whole recovered remarkably well. The sitting-bath and wet compresses had evidently a very salutary effect in healing the perineum; the child also thrived well. This lady had been some years, for the most part, a vegetarian, and drinks neither tea nor coffee.

Case X.—July 31, 1850.—A lady residing in a healthy part of the country was confined the tenth time at this date. She ate no flesh-meat during pregnancy; the diet was entirely vegetable, including the different kinds of berries and fruits in their season; her drink pure water only.

Living thus, she was able to attend to the dairy, making her own butter, and performing all the cooking herself for a family of eleven persons, up to the very day of her confinement.

Labor commenced in the evening, and soon after, at the recommendation of her husband, she was sponged over the whole surface with cold spring water, and soon after took a cold sitting-bath. In about an hour after this she was delivered of a fine plump boy weighing ten pounds. After resting a little, and being somewhat fatigued and suffering some pain, her husband proposed another ablution, to which she readily consented. After this she slept well till sunrise the next morning. The wet girdle had been worn nights some time previous to labor, and was continued about a week after it.

The first morning she was washed all over, and felt very comfortable after it. She partook of rye-bread toast and blue-berries, with water for drink; this was her whole breakfast, and her appetite was good. At night she took

a sitz-bath for five minutes, the chill taken off the water, then sponged the body and retired to rest; she slept well all night. She had no nurse but her husband.

The second morning she experienced no pain; followed the course of the preceding day, namely, the bathing of the body and the sitz-bath washing; partook of unleavened wheat-meal cakes for breakfast, with good ripe berries; for dinner, corn-bread with berries; supper, dry toast made of brown bread, with blue-berries; no drink at any time but the best of pure cold water. The third morning she walked about the room; helped to bathe herself; appetite good; food pretty much the same as the day previous; spent a large share of the day sewing; sitz-bath washing as usual at night. The fourth day she was able to bathe and dress herself, partook of meals with the family, and kept about house all day.

From this time forward she took the entire care of her child; neither mother nor child have taken one particle of medicine, nor any herb drinks of any kind or name, and both have been perfectly well and regular in all their habits up to this time, it being two months since the birth. All that the child has ever had was two or three teaspoonsful of cold water at the time of its birth; after which it was put to the breast. I ought to mention that the child has also, from the very first, been washed every morning in water made slightly tepid.

Case XI.—This is the case of a newly-married lady of this city, twenty-four years of age, of nervous temperament, studious habits, and highly sensitive but well-balanced mind. She had been for years engaged in teaching in the South, and suffered very much with dyspepsia. She had followed water-treatment, pretty thoroughly, one year

before she became pregnant. The first four months of this period, it being the winter season, she took the sitting-bath an half hour every morning in cold water, and after it bathed the whole body. During the day she wore a large wet girdle, covering the whole trunk of the body, always during the day rewetting before it became dry; at night it was left off.

She experienced at first much trouble from nausea and prostration.

By the use of the wet girdle, the sitting-bath, and general washing, in connection with abstinence—for she passed whole days eating not more than a fourth part of a Boston cracker in the twenty-four hours—she soon got the mastery of her stomach sickness, and other troubles.

After the first four mouths she took the half-hour sitting-bath and general washing three times daily, and wore the large wet girdle as before. She was active in her habits, and for the greater part of the time appeared in as good health as ever in her life before. She remained in the city until the summer, and then left for the country.

About the middle of August, 1850, as she was on the point of returning to the city to make ready for her approaching confinement, under my care, she met with a fall. This brought on labor some weeks earlier, as she supposed, than it should have been. It was rather severe, lasting twenty-four hours. She took ether, as is the custom with many in New England, where she was—an unnatural and injurious practice as I regard it to be. Her child was born on the morning of the 15th of August, soon after midnight. During labor she ate nothing, bathed a number of times, and took clysters of water, all of which served to refresh the system.

In less than an hour after the birth, she was helped into the tub; sat some ten minutes in the water, and was washed over the whole surface. She could easily have borne her weight. The wet girdle was applied, and other cooling fomentations, after which she slept soundly till morning.

She was then bathed again, as before, and after this washed her infant herself, and dressed it the first time, and thereafter continued daily to take the care of it.

She took daily three baths in the wash-tub, the water always at about 70° Fah., and continued to wear the wet girdle and compresses night and day the whole of the first two weeks.

The first day she sat up half an hour, besides taking the baths. She could easily have remained up a large share of the time, but being among those who knew nothing of water-treatment, she preferred being on the safe side. The second day she sat up an hour, and felt well and strong. The first and second days she ate almost nothing. The third day she was up all the time, and took her meals with the family. The fourth day she walked out, and visited two families near. The fifth day she carried her child in her arms, walking with perfect ease a quarter of a mile, and feeling no fatigue. During the first days she had some trouble with swelling of the breasts. Cold water was poured upon them a good deal, and wet compresses worn. She also persevered much in drawing them herself with the tobacco pipe, and by these means conquered the difficulty readily. In three weeks she was able to travel alone with the infant, some 250 miles, to this city. She came first about four miles in a stage coach, thence by railroad to the steamboat, thence over night to the city,

and then rode nearly or quite three miles over the rough pavements in the morning to her city home, it being just three weeks to a day from the birth of her infant.

This worthy and intelligent lady remarked, that she considered it her duty to make known to the world her experience in the water-treatment. She said "that many suppose they cannot avail themselves of the advantages of the new method, for the reason that they are not within the reach of a physician who is competent to practice it. But," she continued, "there is not a lady in the whole United States who may not readily learn as much about it as I myself did. I gained all my knowledge from books, and had never for once conversed with any one who had gone through with the treatment in childbirth." Great good must necessarily be accomplished if women will but read, understand, and practice, carefully and intelligently, for themselves.

Case XII.—A lady of delicate health and small stature, twenty-nine years of age, came to our establishment in the autumn of 1850, to be confined with her first child. On the 5th of November, considering herself within a week or ten days of confinement, she went, by my permission, in company with her husband, to hear Jenny Lind, at Tripler Hall. She slept well during the night after the concert, and at six the next morning she was awakened by pains resembling labor. These gradually increased until her child was born, a little after eleven in the forenoon, her labor being, on the whole, an easy one.

Two hours after the delivery she was taken up, and bathed thoroughly in a sitting-bath tub, the water at 70°. Being delicate, it caused her a good deal of shivering at the time; but this amounted to no harm, and usually

occurs during a number of the first baths after delivery. At evening she was again bathed as before, and slept well during the night. Cold wet compresses were used freely, as according to our custom in such cases.

The second day, and onward, she was bathed four times —before breakfast, dinner, and supper, and on going to rest. She was able, also, to sit up more or less daily, and the first three days went on, in all respects, apparently well.

The fourth day, in the afternoon, there occurred a circumstance of ominous character, such as I hope it may be my lot seldom to encounter. I refer to the coming on of that most fearful malady, puerperal fever—the puerperal plague, as it has been appropriately called. The patient was already somewhat feverish, which was caused probably by the new excitement of milk in her system.

At the same time some relatives came to see her, it being the first time of their visiting her after the birth. They were in high glee, joking, talking, laughing, and making all manner of fun for a considerable time. All this transpired without my knowledge.

At the edge of evening, I found the patient in a most terrific fever; her flesh was very hot, face flushed, pains in the back, abdomen, and head; the pulse full and throbbing at 140 per minute. Judge my surprise at these phenomena, knowing, as I did, that the patient had been remarkably well in the morning; I had not yet learned of the excitement she had undergone during the afternoon.

It is evident enough, I think, that under such circumstances, some powerful and decided means must be resorted to; otherwise the disease might proceed so rapidly as to destroy the patient's life, and that too, possibly, within twenty-four hours.

We commenced the treatment by giving her a thorough ablution in water, a little tepid at first. She was then placed in a heavy linen sheet but moderately wrung from cold water, and packed loosely, with but little covering. The object of these applications was gradually to cool the system; to bring down the pulse, as soon as might be, to its natural standard; to arrest the inflammation that was already going on in the abdomen; and to quell the pains. The wet sheet was changed every twenty to thirty minutes. Gradually the pulse became less frequent, and the pains less, till midnight, when we had succeeded in bringing the pulse permanently down to 80, and the pains were quite gone. The wet sheet was then folded each way, making it four double, and placed about the patient's body, from the arms downward; in this she was to sleep the remainder of the night, having just covering enough to keep her comfortable. But if she should become wakeful from pain or feverishness, the husband was to renew it, that is, re-wet it in cold water, and as often as necessary. Once or twice only it was changed before morning.

The reader who is at all acquainted with the danger and the fearfulness of this most awful disease, may form some idea of the anxiety I felt when I first found this patient with the attack upon her. He may judge, too, something of my feelings, when, by midnight, I had succeeded in bringing the pulse down to 80, and quelling all fever and pain.

The next morning the patient appeared in all respects well, but somewhat weak, and not a little blanched. She got along afterward in all respects perfectly well.

In a very short time—I do not now remember in how many days after the birth—she commenced walking out

carefully, and riding in the city to improve her strength, with a view of returning home as soon as circumstances might warrant.

When her infant was nineteen days old, feeling in all respects strong and well—as much so, perhaps, as ever in her life—she proceeded, in company with a female attendant, on her journey homeward, about three hundred miles.

I should remark that this patient was always of weak, nervous, and delicate constitution. She had had a miscarriage three years before this confinement, which weakened her a good deal. During this second pregnancy she adopted the water-treatment under my directions, but was obliged to use, both for bathing and drinking as well as other purposes, very hard, limy water—a circumstance considerably against her. She experienced numerous little ailments, but on the whole got along very well.

Case XIII.—Nov. 8, 1850.—A lady residing in the city of Brooklyn, of small stature, tolerably good constitution, nervous temperament, and I should judge about twenty-five or six years of age, gave birth to her third child near midnight of the above date. Having suffered a good deal at her last preceding confinement, particularly with after-pains, she had resolved at this time to adopt the water-treatment.

Very soon after the birth, the placenta having been expelled soon after the child, the most fearful after-pains commenced, precisely in the same way the patient had suffered before; and she had doubtless, as many have, experienced incomparably more pain after the birth of the child than before it. This is all unnatural and wrong, and would not be, if human beings had from the first always obeyed the physical laws. But is there no method by

which these pains—terrible and persistent as they often are—may be prevented? Certainly, if the experience of thousands may be taken as a guide. No drugs can do it. Suppose we give strong opiates, as some few of the more stupid practitioners may yet sometimes do, we may allay the pains somewhat for the time. But who does not know that the pains are in the end made worse? And what havoc does such treatment make with the nervous system? But, fortunately, physicians have, as a general thing, abandoned this practice.

In this case we helped the patient into the wash-tub, having the back elevated two or three inches by a block of wood, she sitting in it with the feet outside, and there being a couple of pails of tepid water in it. She was rubbed for a long time—say fifteen or twenty minutes—until all pain was removed. A large, heavy sheet was then folded both ways, making it four double, and laid upon the bed; on this she was placed, after which it was folded about her, reaching from the arms to the knees. The application caused a good deal of shivering, but as I told her, *the more shivering the less pain*, she bore it patiently. She was covered, so as to make her in a reasonable time comfortable, and there was, I believe, moderately warm applications made to the feet.

This being at about one o'clock in the night, I directed that if the pains should again come on, as they probably would, she should be rubbed as before a long time in the shallow-bath, have the wet-sheet renewed, use the wet towels about the abdomen and genitals, as we always do, without exception, in such cases, and to repeat these processes without any reference to hours or time of day, as might be needed to keep off the pains. Once only before

morning was it necessary to repeat them, and she enjoyed, on the whole, a good half night's rest *in the folded wet-sheet.* In the morning another bath was taken, when she found herself very comfortable, and, withal, strong.

This patient being at a considerable distance from my home, I saw her, I think, but twice after the birth. She bathed three or four times daily, used the wet compresses freely, and took injections according to need, and suffered almost nothing with after-pains. She kept her strength well, and sat up to rest herself more or less every day.

The third or fourth night—the latter, I think it was—she was a good deal wakeful from fever. Seeing her in in the morning, I directed the bath and folded wet-sheet as before, which at once subdued all unfavorable symptoms. Had she resorted to them in the night time as often as the symptoms might have demanded, she would have obtained a good night's rest.

All things considered, our intelligent patient found a vast difference between water-treatment and that to which she had been before subjected; and she was well rewarded for the heroism, self-denial, and perseverance which she manifested at and before the time of her confinement.

Case XIV.—November 10, 1850.—This is a case of an intelligent young lady of this city, of apparently delicate health, and, I should judge, twenty-two or twenty-three years of age.

Having been recently married, she spent the winter of 1849–50 probably in too much excitement for the health of one in her state. Her home besides—a fashionable boarding-house—was not one at which the proper food could be obtained; in short, she lived too freely, and that upon food of improper character.

In the month of May she experienced a severe attack of bilious fever, and also, comparatively unacquainted with the water-treatment, she had the good sense to determine at once to submit herself confidently to the new method; she had, indeed, no confidence in any other, and her intelligent husband coincided with her in opinion, while the other friends objected strongly to what they considered a piece of fool-hardiness.

By the freest use of packing sheets, of short duration, shallow-baths in the wash-tub, the wet girdle and tepid clysters frequently repeated, together with entire abstinence from all food, she was completely cured in a few days.

Here let it be remembered, that such attacks of fever, as indeed of all severe acute diseases, are far more dangerous when they occur during pregnancy.

After recovering from this attack, our patient went for a time to the country, and followed all along a good course of bathing, with more attention to diet. Her health improved constantly up to the close of her period.

She came to labor the night of November 10, 1850. It lasted only about six hours—rather a quick one for the first—natural, and on the whole easy. Her child was a fine healthy boy.

Cold wet compresses were used freely, as ordinarily in such cases. She suffered little or nothing from after-pains.

The lady was inclined to take only a moderate course of bathing during recovery, and I did not regard it best to urge her. Two or three times a day, however, she had an entire ablution of some sort. I think she sat up more or less every day. She had all along a good appetite, slept well at night, felt cheerful and contented, and in a few days found herself in all respects quite well.

This case, although not of very marked character, is yet an instructive one, when we take into consideration all of the circumstances connected with her pregnancy.

Case XV.—A laboring woman, who had been deserted by an intemperate husband, applied to me in the summer of 1850 for advice. She was poor and melancholic, and knew not what to do. Our house was too full to receive her at the time, but a benevolent lady of the city gave her a good home, and some small wages, for what light work she was able to perform, but on the condition that she should find some other place in which she should be confined.

This was her second pregnancy, her first child having died at birth. She was now debilitated, and had worn her clothing a good deal too tight. I endeavored to persuade her to do all she could under the circumstances toward the restoration of her health, and especially, to avoid the great evil which I have mentioned.

On the 18th of November, 1850, the patient having been some days an inmate of our establishment, gave birth to an apparently healthy male child, weighing nine pounds. During two days she experienced pains, more or less. Being very much busied at the time myself, my worthy friend, Dr. Wm. E. Rogers, of Waymart, Wayne county, Pa., superintended the delivery in a faithful and skillful manner. With his own hands he changed the wet cloths every few minutes, during the period of four hours. These, of course, aided very materially in warding off after-pains, and all other evils incident to the puerperal state.

The patient having no nipples, could not nurse her child. They had been *countersunk*, as carpenters would

say; that is, they had been driven into the breast, doubtless by the patient having been in the habit of wearing too tight clothing upon them. This not unfrequently happens with those who unwisely attempt to improve upon the form which nature has given them.

No milk whatever could be obtained from the breasts; they were inflamed considerably, three or four days at first, but, by appropriate treatment, the difficulty soon ceased.

Previous to entering our establishment, the patient had never in her life taken an entire ablution, that she could remember of. After the birth, she had, in connection with the compresses, one towel-bath a day. Three days after the birth, that is, on the fourth morning, she found herself sufficiently strong to enable her to go down five flights of stairs without assistance, and twice went out of doors. The next day she worked in the kitchen, and by following up the daily bathing, with care and diet, she was very soon fully recovered.

It will be seen that this patient had comparatively but little general treatment. The persevering use of the cold fomentations, adopted at the first after delivery, must have operated powerfully in warding off heat and other inflammatory symptoms, which tend so much to reduce the strength.

Considering the fact of the inflammation of the breasts, and that no milk whatever could be obtained, it was rather remarkable that she was carried through it without having them suppurate and break.

Case XVI.—December 20, 1850.—The patient was, I judge, about twenty-five or twenty-six years of age; apparently of scrofulous habit; eighteen months before, gave

birth to her first child. At that time she was kept in her room three months constantly, with a broken breast. This time she resolved to avail herself of the water-treatment, with a hope of avoiding the awful sufferings which she had before endured.

She bathed pretty freely and daily during this her second period, following the advice laid down in the work entitled "Water-Treatment in Pregnancy and Childbirth." She kept also busy about household duties, which aided her a good deal in maintaining good general health.

On the evening of the above-mentioned day, December 21st, 1850, the patient was confined, pregnancy having lasted only 265 days, 15 days short of the usual time; the labor was, on the whole, an easy one, and ended between 6 and 7 o'clock in the evening.

Usual treatment, with cooling compresses, was followed faithfully, and after the patient resting a little, a thorough ablution in the wash-tub was given. She slept well during the night.

The patient had long been troubled with piles, and, as usually happens under such circumstances, she experienced a good deal of trouble from the affliction at the time of the former birth. So also, at this time, it came on so bad as almost wholly to prevent her sitting up.

With the view of checking it as soon as might be, we commenced the next morning with the cold packing-sheet, twenty minutes. She had four baths in all during the day and evening, the water pretty nearly cold. She felt all along perfectly well, and would have been able to sit up a good deal the first day, were it not for the troublesome ailment mentioned.

The second day, and onward through the first week, the

treatment followed was the cold pack in the morning twenty minutes, and the bath after it; bath in the wash-tub before dinner; the cold pack and bath again toward evening; the bath again before going to rest; and cold compresses most or all of the time, night and day.

At the end of the week the patient was so well that she could go about the house, take charge of her infant herself, and had already dismissed her nurse. She had suffered no feverishness, no pain, nor any restlessness at night. Nor was her strength scarcely at all impaired.

It is now more than two months since the birth of her child, and I have often heard from her, as being in all respects well.

Two important circumstances helped very much in this case; the patient herself is a very intelligent and assiduous person, and had studied faithfully and understandingly the method of treatment which, in her good judgment, she chose to adopt. Her husband, too, had a good understanding of the matter, and was himself a most faithful nurse.

Case XVII.—A young lady, just married, emigrated from the city of Edinburgh, Scotland, early in the summer of 1850. She had been pregnant one month before starting. She was of delicate health, small stature, of fair hair and complexion, and, as we would say, of scrofulous tendency. She had always been sedentary in her habits, and was occupied, for the most part, sitting. and within doors. She had, in short, had but poor opportunity for the development of her physical powers, and had contracted a bad lateral curvature of the spine.

The ship's passage across the Atlantic was a long and boisterous one of eight weeks; she was a good deal sea-sick, and after the first week was compelled, for want of

strength, to remain in her berth night and day; thus she continued for six entire weeks; the eighth, and last week of the passage, she was able to be out a little.

The patient, together with her husband, took up her residence in the very heart of this, in the summer, hot and unhealthy city. She had always been accustomed to a much cooler climate, and now became necessarily a good deal debilitated. She had lived for a time mostly, or altogether, upon the vegetarian principle, in the old country; but in this city she adopted a different course, using coffee, and perhaps tea, and some other articles not altogether friendly to health.

She consulted me, however, some ten or twelve weeks before confinement. I advised her at once to avoid flesh-meat, to drink only cold water, and to bathe and exercise much more than she had been in the habit of doing; the advice was followed faithfully, and with the happiest effects.

December 29, 1850.—Sunday morning, at 4 o'clock, her labor ended. For fifty hours, without intermission, it had continued, depriving her of rest almost wholly, three nights. Of all the examples of fortitude and patience which I have ever witnessed under such circumstances, this was the most remarkable. Notwithstanding the great length of time the labor lasted, the patient did not at any moment despond, nor did she, to my knowledge, utter a single word of complaint. At times she would recline; then again she would sit up, walk about the room, or engage in some light work. She bathed also repeatedly, as the pains were progressing, and the ablutions appeared to refresh the system, and support her strength materially. I repeat, this very worthy lady's fortitude and resignation were remarkable, and such as I shall not soon forget.

This, as I have remarked, was her first child. Under such circumstances there is usually but slight loss of blood. But in this case, owing perhaps, partly to the patient's constitution or state of health, and partly to the severity of her labor, considerable flooding succeeded the expulsion of the after-birth. To check this, she was at once raised and put in the cold sitting-bath. The effect was as sudden and as favorable as could be desired.

The patient had something of after-pains, but not a great deal. Three and four baths were taken daily, and the cooling compresses were freely used.

There were circumstances in this case which caused me some trouble in anticipation; no urine was passed for full thirty-one hours after delivery. Considering how much had been done in the way of bathing, water-drinking, and wet compresses, it was singular that such should have been the case. But no harm whatever occurred in consequence of the renal secretion being so long prevented.

Day by day, the patient gained strength; it was against her recovery somewhat that she was obliged to remain in the same room—and a rather small one—where the family cooking and other work was done. Still, through great faithfulness and perseverance in the treatment, she recovered in all respects remarkably well.

The notes I made of the case at the time are as follows:

"*First Day.*—Patient was sponged over in bed a number of times, whenever the cooling compresses were not found sufficient to check the after-pains. Slept considerably during the first night, but, as is common after the rest has been broken a number of nights in succession, the sleep was somewhat disturbed. The compresses were

changed very often. She was not raised up for a bath, as it was thought that, in consequence of the severity and great length of the labor, she was too weak.

"*Second Day.*—Bath in the wash-tub three times, and body sponged in bed two or three times besides. Urine was passed thirty-one hours after the birth. Patient sat up to-day in bed.

"*Third Day.*—Bath in the tub four times; the water cold as usual. She preferred this; it gave her nerve. It made her shake a good deal at the time, but this circumstance is attended with no danger. Sat up an hour and a half at a time to-day. Appetite good."

It was remarkable in this case, that the pulse remained at 100 and upward for a number of days after delivery; yet the recovery was certainly highly favorable.

Within the second week the patient was able to go out and walk in the open air.

In eighteen days she brought her infant in her own arms to my house, a distance of about one mile, and returned again home, experiencing very little fatigue.

About six weeks after the delivery she met with an accident, which caused her considerable suffering. She received a blow upon one of the breasts, not very severe, but sufficiently so to cause an inflammation, which ended in abscess, or broken breast, as it is usually termed. By following up the water processes faithfully, that is, by taking frequent ablutions, packing-sheets, with compresses constantly upon the breasts, sometimes tepid and at others cold, according to the feelings of comfort, she passed through the period of healing much better than is usually the case with broken breast.

Considering the patient's constitution, her voyage across

the Atlantic, her residence in the heart of a hot, unhealthy city, the length and tediousness of her labor, her recovery was remarkable.

Case XVIII.—This is the case of a young married lady with her first child. She is of rather nervous temperament; too active naturally for the good of her system.

January 11, 1851.—She was confined after a seven hours' labor. Two or three days before, she had evidently overdone at ironing and other household duties, which she was too fond of performing. Her full period would, I think, have been six to seven weeks later, the birth being premature, in consequence of the over-exertion alluded to. The child, however, was above the average weight—a daughter—but did not seem to possess its full share of vitality.

The usual treatment of ablutions three and four times a day, with cooling compresses, the wet girdle, clysters, etc., was practiced, and with the happiest results. The patient sat up, day by day, and recovered, not quite so rapidly as some, but in all respects well.

Case XIX.—A lady, thirty-eight years of age, recently married, came to her confinement the 4th of March, 1851. For two months only she had been bathing, with reference to her expected time; her health has generally been very good, and all along, during the period of pregnancy, she attended personally to her household matters, rendering her little habitation as perfect a specimen of order and cleanliness as could be conceived of.

All this tended powerfully to preserve health of body, and cheerfulness and contentment of mind, circumstances never more important than during the period of pregnancy.

We would expect, naturally, that a patient at this age would suffer the first time a severe and protracted labor. But in her case it was far otherwise. True, for two days previous to delivery she experienced some symptoms of labor, but was able to be about, and slept considerably nights. At 10 o'clock, A. M., on the 4th instant, labor had fully commenced; at 4 P. M., delivery took place; making labor only six hours, on the whole a short one.

Not long after the birth, the patient was helped into the tub for a thorough wash. She would have been able, I think, to perform the ablution herself alone; still, it was thought best that she should make no effort at the first bath.

It is now the third day since delivery, and the patient has had three or four ablutions daily in water at 70° Fahr. She has used the compresses freely; the wet girdle much of the time, which she finds to strengthen her back. She sat up more or less every day, usually after the bath.

The third from the birth, she was going about her room, putting things in order, feeling in all respects well. The milk was secreted freely, and she has had no trouble from the breasts, from feverishness, or any other cause; the infant doing also as well as the mother.

On the sixth day, the patient went from home, taking her infant with her, on a visit to a friend residing in another street.

LETTER XXXVIII.

CONCLUDING REMARKS.

Hysteria—Its Prevention and Cure—Leucorrhea, or Whites—Falling of the Womb.

THERE are two or three topics connected with the diseases of the sex, respecting which volumes might be written, concerning which I will here make some practical remarks.

HYSTERIA.

This affection takes its name from *hyster*, the womb. It appears under such a variety of forms, imitates so many other diseases, and is attended with such a variety of symptoms, which denote the animal and vital functions to be considerably disordered, that it is difficult to give any thing like a rational description of it.

Hysteria attacks usually in paroxysms or fits. "These are sometimes preceded by dejection of spirits, anxiety of mind, effusion of tears, difficulty of breathing, sickness at the stomach, and palpitation at the heart; but it more usually happens that a pain is felt on the left side, about the flexure of the colon, with a sense of distention, advancing upward till it gets into the stomach, and, removing from thence into the throat, it occasions, by its pressure, a sensation as if a ball were lodged there, which is called *globus hystericus*." At this time the patient feels as if she

were actually in danger of suffocation, grows faint, is affected, perhaps, with stupor and insensibility, while at the same time the body is turned to and fro, the limbs are thrown into motion, and wild and irregular actions take place, with alternations of laughter, crying, and screaming. There is also frothing at the mouth, eructations of wind from the stomach, hiccough not unfrequently, and in some cases a transient delirium is experienced. The limbs may also become so rigid that it is not possible for the patient to bend them.

Treatment.—If the paroxysm be only a slight one, it is as well to leave the patient quite to herself; but if the fit be a severe one, the shallow-bath, in a wash-tub, for instance, or the dashing of cold water, and rubbing the surface well with hands wet in cold water, will be highly serviceable. If the patient can drink a sufficiency of warm water to make her vomit, she will experience great relief. The clyster, freely administered, is also a valuable help.

In regard to the *prevention* of this disease, all that I have said or can say concerning the means of fortifying and invigorating the general health, would be as appropriate in this as in any other place. May I not hope that when you consider, each and any one of you, how troublesome this disease is, and how bad a state of things it indicates, that you will use your best influence upon those around you—that by a correct, systematic course of living, its attacks may be warded off. It is far easier, as well as more desirable, to prevent hysteria than to cure it.

LEUCORRHEA, OR WHITES.

This is a very common affection among females, few arriving at full womanhood without experiencing it. It con-

sists in a puriform discharge from the vagina, varying in color in different cases, but more commonly it is of a yellowish white. It always denotes a deteriorated state of the health, and if allowed to proceed too far, is apt to end in some worse malady.

The water-treatment is peculiarly adapted to the cure of this ailment. The great object should be to fortify the general health. For this object, a good course of hydropathic treatment will in many cases be necessary. The vaginal injections—not too cold—and sitting-baths are valuable means.

PROLAPSUS UTERI.

Falling of the womb has latterly become too much a fashionable complaint. A great many women suppose they have it, merely in consequence of some unpleasant feeling, and because it is so much talked about.

I cannot here enter into a lengthy description of this disease; but I desire, most earnestly, to impress upon your minds the great value of the water-cure as a means of remedying it. Prolapsus is a disease of *general debility*, and hence the good effects of the new method in treating it.

Do not depend too much upon local and mechanical means; these are too much in vogue at the present day. True, vaginal injections, the wet girdle, sitting-baths, and in some cases the pessary, are all good in their place; but the restoration of the WHOLE SYSTEM, remember, is the great thing.

Those who have this complaint, should be careful not to overdo in walking or other exercise.

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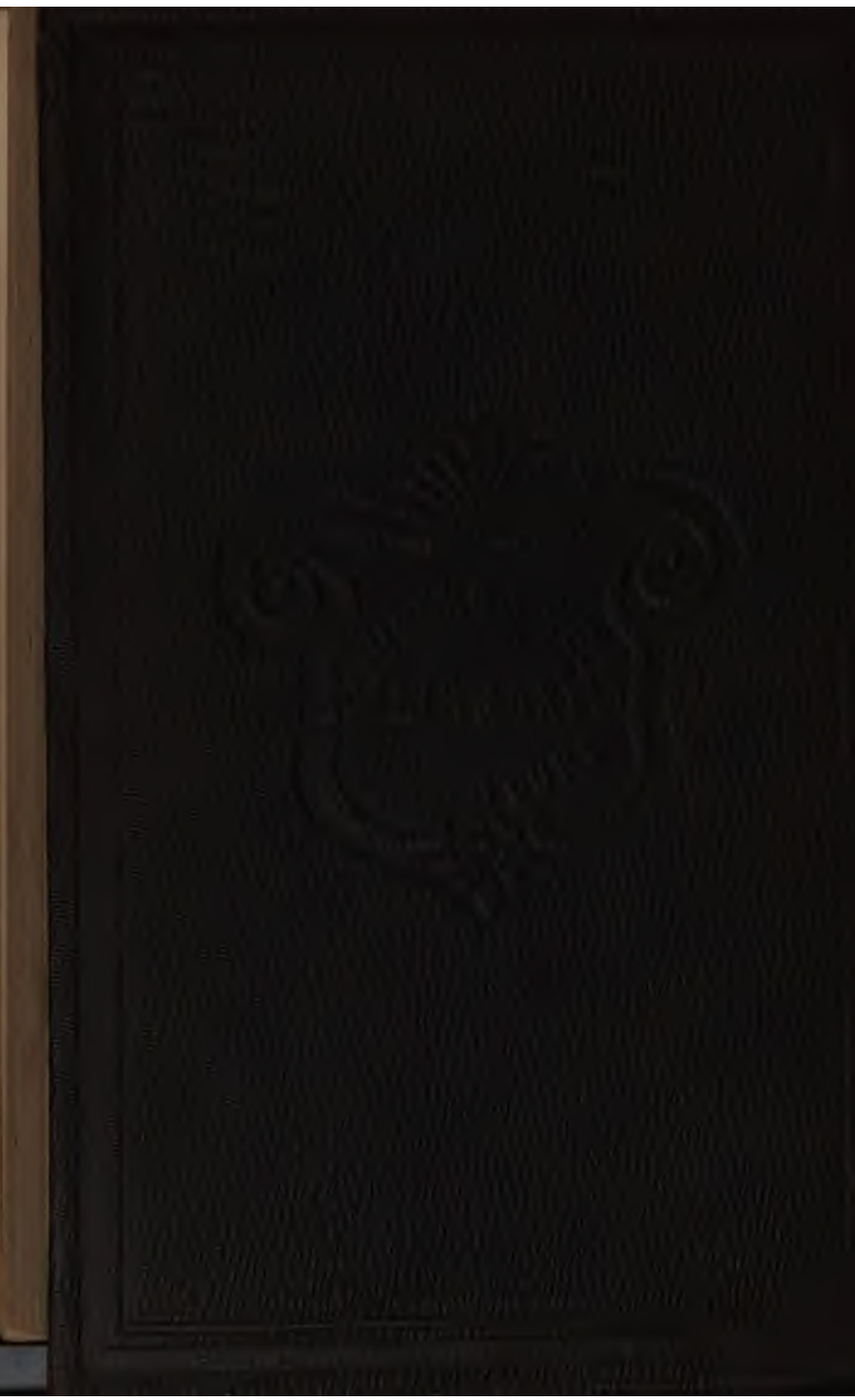
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